Operating Instructions

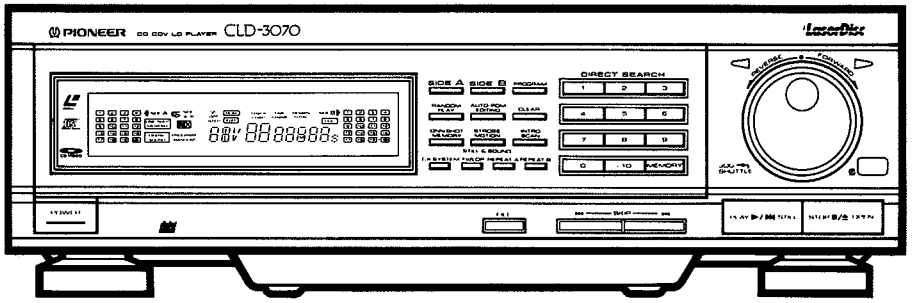
CD CDV LD PLAYER
CLD-3070

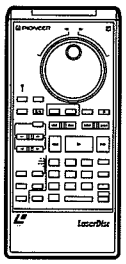
NTSC

COMPACT disc DIGITAL AUDIO

CD VIDEO

LaserVision





Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

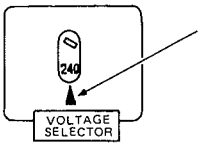
LINE VOLTAGE SELECTOR SWITCH

Only multi-voltage models are provided with this switch. U.S., Canadian, European, U.K., and Australian models are not provided with this switch.

Mains voltages in Saudi Arabia are 127V and 220V only. Never use this model with 110V setting in Saudi Arabia.

A 4-point (110V/120-127V/220V/240V) or (110V/120V/220V/240V) voltage selector switch is located on the rear panel of the player. Check that it is set properly before plugging the power cord into an AC outlet. If the voltage is not properly set or if you move to an area where the voltage supply differs, adjust the selector switch as follows:

1. Disconnect the power cord.
2. Use a medium-sized (flat blade) screwdriver. Insert the tip of the screwdriver into the groove of the selector switch and turn it to set the player to the power voltage of your area.



Point arrow to power voltage of your area (Figure shows arrow pointing to 240 volts.)

PIONEER®
The future of sound and vision.

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The safety and operating instructions should be retained for future reference.

HEED WARNINGS — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

CLEANING — Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

ATTACHMENTS — Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

WATER AND MOISTURE — Do not use this video product near water — for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

ACCESSORIES — Do not place this video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video product. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

CART — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

VENTILATION — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

POWER SOURCES — This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

POLARIZATION — This video product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

POWER-CORD PROTECTION
Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

LIGHTNING — For added protection for this video product receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.

POWER LINES — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

OVERLOADING — Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

OBJECT AND LIQUID ENTRY — Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.

SERVICING — Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

DAMAGE REQUIRING SERVICE
Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
a. When the power-supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the video product.
c. If the video product has been exposed to rain or water.
d. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
e. If the video product has been dropped or the cabinet has been damaged.
f. When the video product exhibits a distinct change in performance — this indicates a need for service.

REPLACEMENT PARTS — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

SAFETY CHECK — Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
See Fig. A.

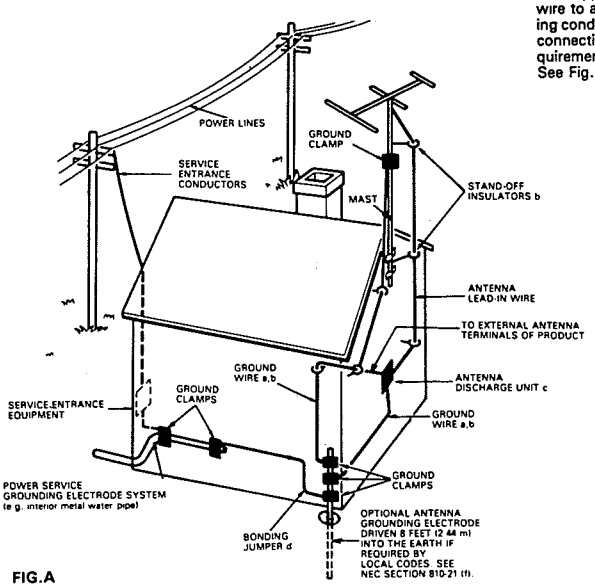


FIG.A

a) Use No. 10 AWG (5.3 mm²) copper wire, No. 8 AWG (8.4 mm²) aluminum wire, No. 17 AWG (1.0 mm²) copper-clad steel wire, bronze wire or larger wire as ground wire.
b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
d) Use jumper wire not smaller than No.6 AWG (13.3 mm²) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

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[FOR U.S. MODEL]

CAUTION

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The use of optical instruments with this product will increase eye hazard.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

■ This player may be used with LaserVision Discs, Compact Discs, and Compact Discs with Video bearing the following symbols:

(LaserVision Disc)

This is the unified symbol mark of LaserVision videodisc

LaserVision

* LaserVision players and discs which bear this symbol and use the same television system, are mutually compatible.

(Compact Disc)

COMPACT disc DIGITAL AUDIO

(CD VIDEO SYSTEM)**

CD VIDEO

** A Digital Sound with Multi Audio Disc (CD VIDEO LD) and a CDV (CD Video CDV) are referred to as CD Video discs. CD Video discs are recorded with subcodes, which are the non-audio recordings of TOC data such as track numbers, index numbers, etc.

Only one disc can be loaded as any one time. Loading a LaserVision Disc, a Compact Disc or a Compact Disc with Video on top of one another may result in breakdown, or in scratching of the discs. Please only load one disc at a time.

This player is to be used exclusively with the NTSC color system. Please use NTSC LaserVision Disc or NTSC Compact Disc with Video only. PAL and SECAM system discs cannot be used with this player.

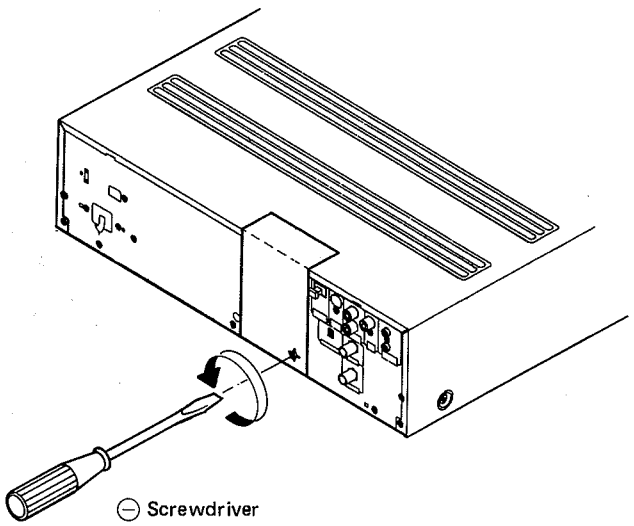
ATTENTION

At the rear panel, there is a red transit screw used for when the player is transported. Before using the player, turn this transit screw counterclockwise and remove.

If the transit screw is still in place and LD playback is done for example, the screen will display "RELEASE TRANSIT SCREW" when the B side is to be played.

If this happens, turn off the power. After the "OFF" indicator stops flashing, remove the transit screw.

Retain this screw as it will be necessary when the unit is to be transported. Also, before transporting the player, take out the disc, close the disc table, turn off the power, and after the "OFF" indicator stops flashing, unplug the power cord from the outlet. Then install the transit screw by turning it clockwise. Fasten the screw securely.



FEATURES

α (ALPHA) TURN DUAL SIDE PLAY FUNCTION
LaserVision Discs can be played continuously without having to be turned over.

DUAL CENTERING
A LaserVision Disc has two different sides which are labeled as side A and side B. When the disc is clamped, it may cause color distortion or other malfunctions due to centering misalignment caused by label difference. For this reason, side A and side B are clamped independently to prevent centering differences.

AUTO LOADING FUNCTION WITH AUTOMATIC DISCRIMINATION
The disc table is automatically opened and closed by the motor drive, so mounting and removing discs is simple. When the disc table is pulled into the player, the player automatically senses the disc type and starts to play.

S-VIDEO OUTPUT
There is an internal Y/C separation circuit that uses a high-performance comb filter. It can be connected directly to the S-video input on the new AV televisions.

DIGITAL FILTER AND 2-D/A CONVERTER
The audio circuit incorporates a 4X over sampling digital filter. This makes the sharp, low pass filter unnecessary. There is low audio distortion around the phase until a high range of 20 kHz is reached. Moreover, independent left and right D/A converters are used, bringing superior separation characteristics.

OPTICAL DIGITAL OUTPUT
An optical digital output terminal is provided for connection to amplifiers with optical digital input or to separated D/A converters.

THIN TYPE 20-cm LD SINGLE DISC
Of course, both the regular LaserVision Discs (12-inch, 8-inch) and the thin 8-inch singles can be played without an adaptor.

3-inch CD DISC
Of course, both the normal Compact Disc (5-inch) and the 3-inch Compact Disc (CD single) can be played without an adaptor.

FILE FUNCTION FOR THE MESSAGE, PROGRAM AND PLAY SETTINGS
Your desired messages can be input, or just the selections you want to play (chapters) can be programmed, or up to two locations in the play section can be recorded in units of minutes and seconds within the player (maximum 60 selections).

INTRO SCAN FUNCTION
The first eight seconds of each selection is played successively starting with the first selection on the CD. On the LaserVision Discs, the first eight seconds of each chapter is played, the final screen remains displayed and then the display advances to the next chapter. One screen after the other can be displayed successively in this way.

A SIDE/B SIDE CONTINUOUS PROGRAM
Continuous play from side A to side B can be programmed if desired. The chapter number to be programmed is displayed in the visual calendar.

LAST MEMORY FUNCTION — THE NEXT SCENE IS PLAYED QUICKLY
If the power switch is pressed and the power is turned OFF when a LaserVision Disc is being played, the address slightly before the address which was playing is stored in the player memory (last memory). When the power is turned ON again and the play begins, the scene just before the last scene that was displayed when the power was turned OFF will be played again.

SPECIAL PLAYBACK FUNCTION
JOG dial/SHUTTLE ring
JOG dial: Playback speed corresponds to the turning speed of the dial. Still, frame-by-frame, 1/2 speed, normal playback, and high-speed playback (2X) can be obtained.
SHUTTLE ring: Depending on the ring position, fast forward or reverse playback can be obtained at 2X, 5X, and 10X speeds.

STROBE MOTION
Playback is done progressively at set intervals of motion to give a stroboscopic effect. The sound is not affected.

ONE-SHOT MEMORY FUNCTION OUTPUTS PICTURES EVEN WHILE CHANGING DISCS
When the picture is stored in memory, a still video picture will be displayed on the TV screen even after disc playback ends. The still picture will remain even when discs are changed or while another disc is played.

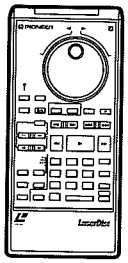
DIGITAL SOUND FROM LASERVISION WITH DIGITAL SOUND DISCS
Discs with digital SOUND mark have digital recordings which can be played to output digital sound.

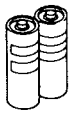
NOISELESS SCANNING
Fast forward or reverse operations can be done without picture noise.

CONFIRMATION OF ACCESSORIES

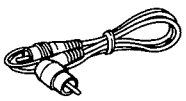
THE FOLLOWING ACCESSORIES ARE SUPPLIED WITH THIS PLAYER.

- Remote control unit
- Size "AA" (IEC R6P) dry cell battery x 2

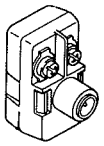




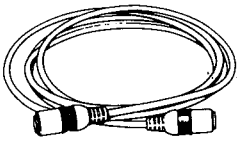
- Video connecting cord (Pin plug ⟷ Pin plug) Use to connect the player to a color monitor etc.



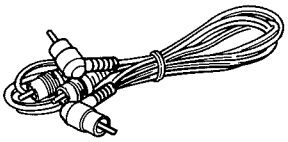
- Antenna adaptor (75 Ω/300 Ω → 75 ΩF) Use to connect a VHF antenna cable to the antenna terminal of the player.



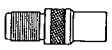
- RF antenna cable (J-type plug ⟷ J-type plug) Use to connect the player to a TV set.



- Audio connecting cord (Pin plug x 2 ⟷ Pin plug x 2) Use to connect the player to a stereo amplifier etc.

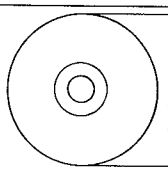
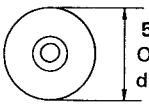
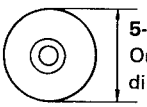


- Operating instructions
- Warranty card
- F-type jack — IEC plug adaptor (U.S. Military model only)



DISCS

LaserVision Discs (LD), Compact Discs with Video (CDV) and Compact Discs (CD) have the following characteristics.

				LD	CDV	CD
Disc shape				 **12-inch (8-inch)** Double-sided or one-sided discs	 **5-inch** One-sided disc	 **5-inch (3-inch)** One-sided disc
Color				Silver	Gold	Silver
Recorded material	Audio only			X	**20** min., Digital	**5-inch:** More than **60** min., Digital **3-inch:** More than **20** min., Digital
	Audio + video	Video		**12-inch** (Double-sided) **CLV 120** min. **CAV 60** min. **8-inch** **CLV 40** min. (Double-sided), **20** min. (One-sided) **CAV 28** min. (Double-sided), **14** min. (One-sided)	**5** min. **(CLV)**	X
		Audio	Digital	○	○	–
			Analog	○	X	–
Disc rotation speed				**CLV 1800 ~ 600 rpm** **CAV 1800 rpm**	Audio portion (Inner circumference) **600 ~ 340 rpm** Video + Audio portion (Outer circumference) **2700 ~ 1800 rpm**	**5-inch 600 ~ 200 rpm** **3-inch 600 ~ 300 rpm**

PRECAUTIONS

Always remove the disc when this unit is moved or packed for transportation. Then return the disc table and turn the power OFF. After the [OFF] indicator stops flashing, disconnect the AC cord. Then tighten the transit screw.

INSTALLING THE PLAYER

- Choose a stable platform next to the television and stereo system to be used with the player.
- When using the player with a stereo system, your speakers should be placed away from your television (or TV monitor).
- Do not place heavy objects such as a television or TV monitor on top of the player.
- Do not place the player on top of your TV set or TV monitor. Also, keep the player away from devices such as cassettes decks which are sensitive to magnetic fields.

When FM or AM stations are being received, signal noise may be generated if the player is turned on. Turn off the player when not in use.
Also, if there is signal noise when receiving radio stations with an indoor antenna, adjust the position or direction of the antenna.

INSTALL THE PLAYER IN A WELL VENTILATED PLACE AWAY FROM HEAT AND HUMIDITY

Do not install the player in a location subject to direct sunlight, or near a stove or radiator etc. This could adversely affect the cabinet and internal components. Also avoid installing the player in a humid or dusty location. This could result in a malfunction or accident. Do not install near cooking ranges where the player could be affected by smoke, steam, or heat.

AVOID SOURCES OF HEAT

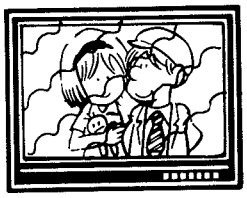
Do not put the player on sources of heat, such as an amplifier. When installing with audio components on a rack, avoid components that generate heat such as amplifiers, by placing the player below such components where there is adequate ventilation with little dust.
Avoid placing the player on surfaces such as shaggy carpets, beds, and sofas which may block ventilation under the player and cause damage.

CAUTIONS FOR AUTOMATIC LOADING OPERATIONS

Since this player has an automatic loading construction, use the key on the player or the remote control key for removal and insertion of the disc table. To avoid damage, be careful not to apply any force to the moving disc table.

STRIPE PATTERNS APPEARING ON A TV PROGRAM

Stripe patterns may appear during a TV program if the power for the player unit is turned on, depending on the quality of reception of the TV station. This is neither a malfunction of the television or the player. If stripes appear while watching the TV, or when watching the TV for long periods of time, turn the power for the player off.



CONDENSATION

Moisture will form in the operating section of the player and the player's performance will be impaired if the player is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly.
To prevent this, let the player stand in its new surroundings for about an hour before switching it on, or ensure that the room temperature rises gradually.

The same symptoms of condensation may be caused during summer, if the player is exposed to the breeze from an air conditioner. In such cases change the location of the player.

CLEANING CARE

Use a soft, dry cloth for cleaning. For stubborn dirt, rinse the cloth in a weak detergent solution, wring well, then wipe. Use a dry cloth to wipe it dry. Do not use any volatile agents such as benzene and paint thinner, as it may damage the surface of the player,

LASERVISION VIDEODISCS

The CLD-3070 can play both LaserVision Discs and Compact Discs. Unlike conventional phonograph records, these discs are played back from the inside edge out.
LaserVision Discs are available as both standard play discs and extended play discs. Discs with digitally recorded sound are also available.

STANDARD PLAY (CAV) DISC

Standard play discs are played at constant angular velocity (CAV).

EXTENDED PLAY (CLV) DISCS

These discs are played back at constant linear velocity (CLV), and are therefore able to play for a longer length of time than standard play discs.

LASERVISION WITH DIGITAL SOUND DISCS

The jackets and labels of these discs bear the symbol on the left.

In addition to conventional analog sound signals, LaserVision with Digital Sound Discs also have recorded on them the same kind of PCM sound signals that are recorded on Compact Discs.
With these discs, the high quality pictures of LaserVision Discs and digital sound, can be enjoyed at the same time.
The two types of sound, digital and analog, are recorded onto the discs using different frequency bands.

LASERVISION WITH DIGITAL SOUND WITH MULTI AUDIO DISC

The jackets and labels of these discs bear the symbol on the left.

Digital audio and analog audio feature different audio reproduction characteristics and the two types can be switched back and forth freely for increased enjoyment of both digital and analog audio.

Audio applications

Audio / Disc	Analog audio	Digital audio
Movies, Animations, etc.	Audio of the main program (Program compilation)	Sound track (Music compilation)
Dual music	Music 1	Music 2
Stereo multi-audio	A 1/L Accompaniment A 2/R Accompaniment with vocal backup	Accompaniment (Stereo)
Stereo bilingual broadcasting	English	Spanish
Tri-lingual	English	D1/L Spanish D2/R German
Quad-lingual	A1/L English A2/R Spanish	D1/L German D2/R French

CD VIDEO SYSTEM (CD VIDEO LD)

This is a LaserVision disc that has this mark attached to the jacket and the label.

The sub-code* is recorded in the previous discs with digital sound.
* The TOC is recorded outside the audio signal and contains the track number, index and other data.

The CD VIDEO SYSTEM is the standard name for the "optical digital video disc system" that includes CDV.

The CD video system is determined by the mark shown on the right. This mark will be found on all players and discs which conform to the CD video system format.

The CD VIDEO SYSTEM includes the following systems.
- CDV discs (CD VIDEO CDV)
- LaserVision Disc (CD VIDEO LD) containing digital sound with sub-codes.
- A combined player which can play CD and CDV.
- A combined player which can play CD, CDV and LD.

CARE OF DISCS

How to hold discs

When loading or removing discs, try not to touch their playing surfaces.

How to hold the LaserVision Disc

Holding with both hands... Hold the disc by its edges with both hands, as shown in Fig. A.

Holding with one hand... As shown in Fig. B, hold the disc by its center hole and one edge.

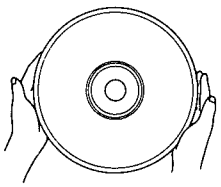


Fig. A

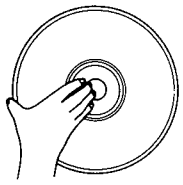


Fig. B

How to hold the Compact Disc

Hold the disc by its edges as shown in Fig. C

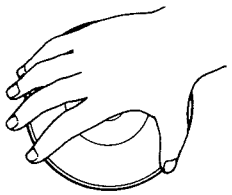
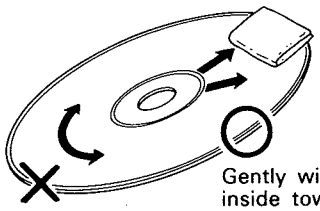


Fig. C

Cleaning

The presence of fingerprints or other dirt etc. on the disc, will not directly affect the recorded signal Nevertheless, dirt on the disc will cause the brightness of the light reflected from the signal surface to be reduced, which may adversely affect sound and picture quality. If a disc is dirty, clean the disc before playing it.

To clean your discs, use a soft clean cloth to wipe them. If necessary, moisten a soft cloth with diluted neutral detergent to remove heavy dirt or fingerprints.



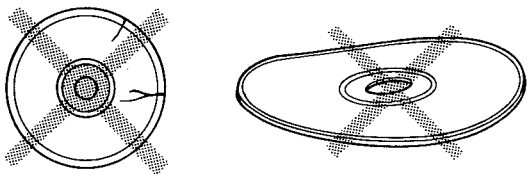
Do not wipe in a circular direction.

Gently wipe from the inside toward the outer edge.

Discs may not be cleaned with record cleaning sprays, or static prevention sprays etc. Also do not use volatile liquids such as benzene, or thinner etc.

DO NOT USE CRACKED OR WARPED DISCS.

■ The disc revolves on the player at a high speed when it is played. Never use a cracked, scratched or warped disc. This may damage the player or cause it to malfunction.

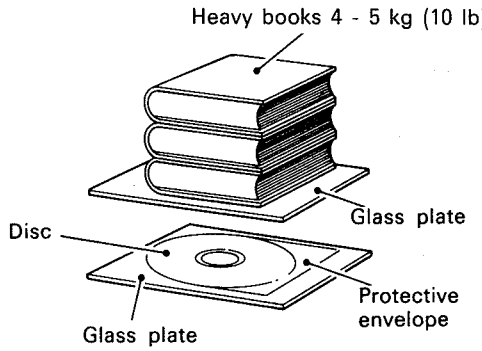


After using discs, store them vertically upright

After playing a disc, always remove it from the player and return it to its jacket. Then store it standing vertically upright away from heat and humidity.

- Take care when storing discs. If you store discs at an angle, or stacked on top of each other, discs may become warped even when in their jackets.
- Do not leave discs in locations such as the seat of car, which may become excessively hot.

If a disc is warped, put the disc into its protective envelope, and then place it between two flat plates of glass. Then place heavy books on top of the plates so that approximately 4 to 5 kg (10 lb) are applied. Leave the disc like this for a day or so. This may correct the warp.



CAUTION WHEN USING THE DISC

All rights reserved.
Unauthorized public performance, broadcasting or copying is a violation of applicable laws.

REAR PANEL FACILITIES

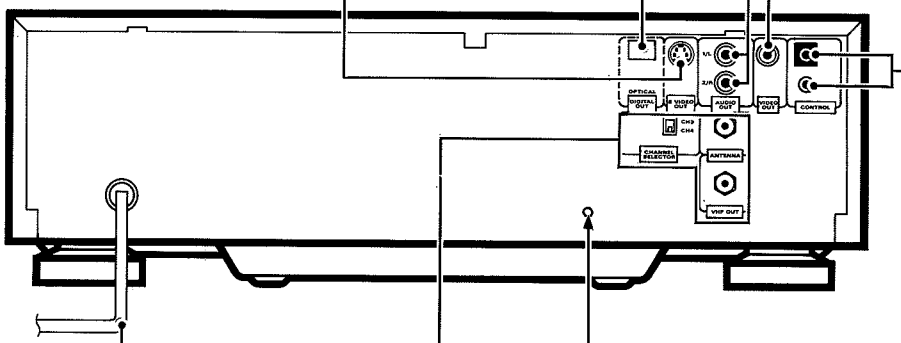
Optical digital output terminal
This terminal optically outputs the digital signals of the disc's audio data and subcode (signals which can be recorded together with the audio signal).

S VIDEO OUT
Connect this terminal to the S VIDEO IN terminal on AV or monitor televisions.

VIDEO OUT terminal (stereo pin jack)
Connect this jack to a TV monitor or a TV set which is equipped with a video input terminal.

AUDIO OUT terminals (stereo pin jack)
These terminals output Compact Disc audio, Compact Disc with Video audio, LaserVision Disc audio (analog) and the audio for LaserVision with Digital Sound Discs. Selection of either digital or analog sound can be made by operating a key on the remote control unit.
Connect these terminals to the CD or AUX input terminals etc. of your stereo amplifier.
Do not connect them to your amplifier PHONO input.

CLD-3070



For the VOLTAGE SELECTOR, refer to page 1.

Transit screw
Always remove this screw before using the player. (See page 4)

Power cord
Connect this to a power outlet.
Power is supplied to the internal memory even when the player is turned off. Therefore, keep the power cord connected to the electrical outlet in the wall. If it is connected to an extra program power outlet in an amplifier (SWITCHED OUT), the file contents will be erased and the Last Memroy function will not operate.

CONTROL IN and OUT terminals (miniature phone jack)
These terminals are for control cords, when the player is used together with other Pioneer products with the Pioneer SR mark.

ANTENNA terminal (75 Ω F-type jack)
Connect the coaxial cable (75 Ω) from the VHF TV antenna to this terminal.

VHF OUT terminal (75 Ω F-type jack)
Connect this terminal to your TV set's VHF antenna terminal.

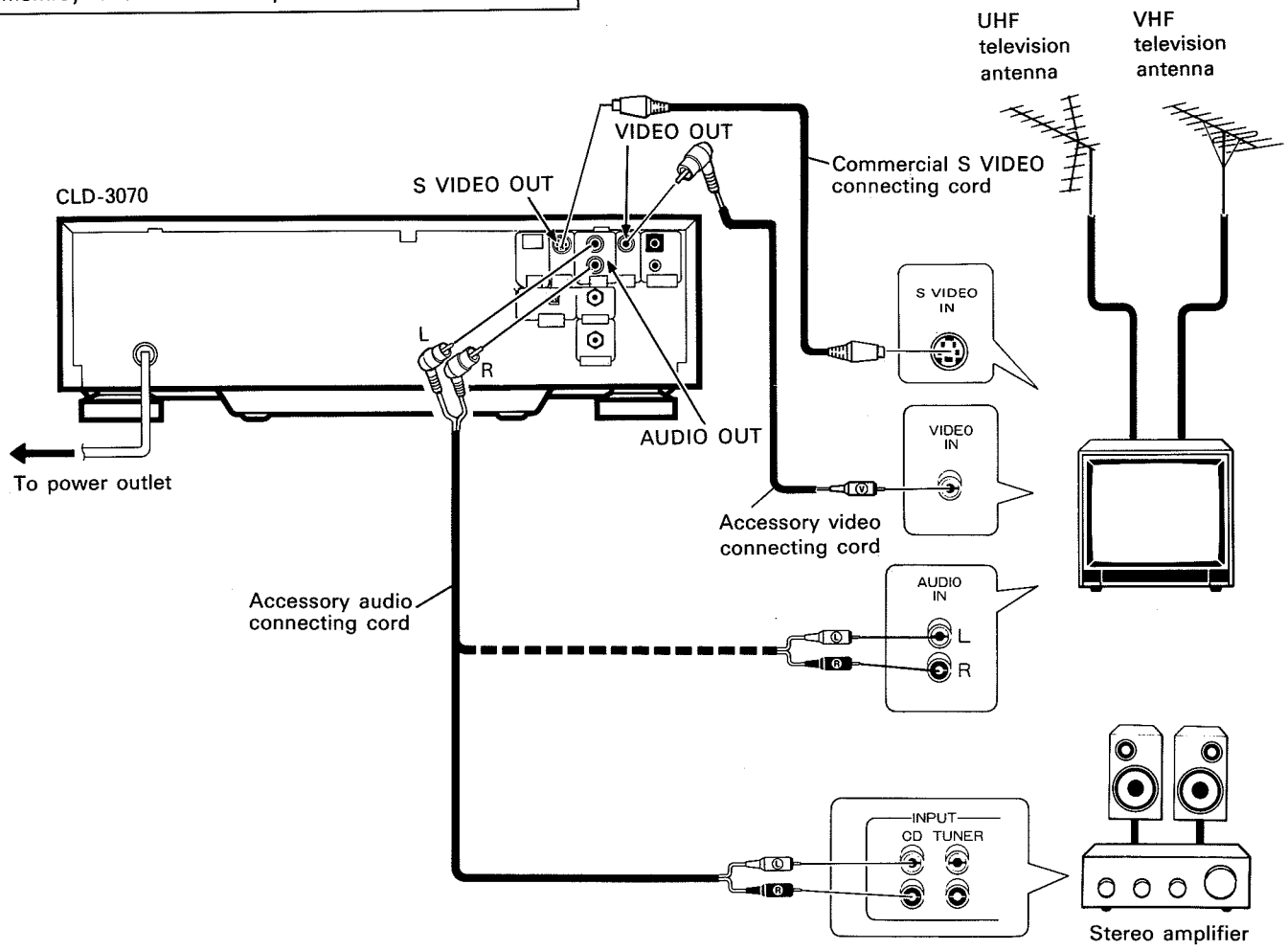
CHANNEL SELECTOR (CH3/CH4)
This switch is for changing the channel of the internal VHF converter.
Set to the channel which is not used for TV broadcasts in your area.

CONNECTIONS

USING TELEVISIONS WITHOUT AUDIO AND VIDEO TERMINALS

CLD-3070, monitor televisions, (stereo system), (VCR)

Power is supplied to the internal memory even when the player power switch is turned off. Therefore, keep the power cord connected to the electrical outlet in the wall. If it is connected to an extra power outlet in an amplifier (SWITCHED OUT), the file contents will be erased and the last memroy function will not operate.



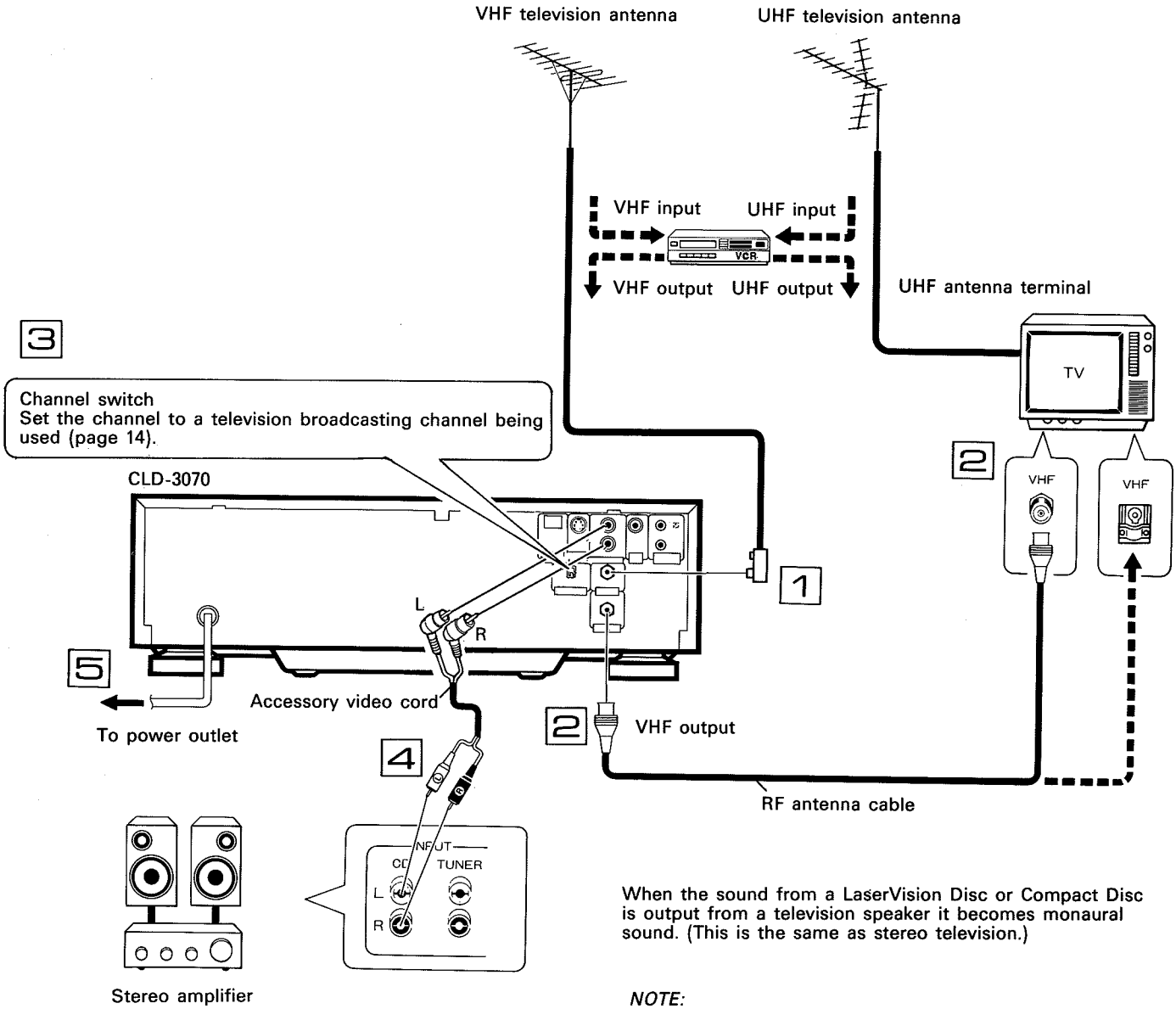
- Connect the video output terminal of the player to the video input terminal of the AV or monitor television.
- If the S VIDEO OUT terminal of the player is used, connect it to the AV or monitor television S VIDEO IN terminal with a commercial S VIDEO connection cord.
- Connect the audio output terminals to the stereo amplifier AUX, CD or other terminals. The television speakers can also be used by connecting the television audio input terminals and the player audio output terminals, however connection to a stereo amplifier is recommended to obtain superior audio playback quality for Compact Discs and LaserVision Discs. Do not change the television antenna and VCR connections.

Refer to page 14 when connecting the player to a stereo amplifier containing an internal D/A converter or optical digital input terminals.
Combined system control is possible when a Pioneer television and audio/video stereo receiver are connected. Refer to page 15 for an explanation of the connection procedure.

CLD-3070, regular televisions, (steroe system), (VCR)

The numbers are explained on the next page. Make the connections in this order.

Power is supplied to the internal memory even when the player power switch is turned off. Therefore, keep the power cord connected to the electrical outlet in the wall. If it is connected to an extra power outlet in an amplifier (SWITCHED OUT), the file contents will be erased and the last memroy function will not operate.



When the sound from a LaserVision Disc or Compact Disc is output from a television speaker it becomes monaural sound. (This is the same as stereo television.)

NOTE:

- *Stripe patterns may appear when a LaserVision Disc is played on a television. Move the antenna cable to a position away from the power cord to avoid this.*

1 VHF TV ANTENNA CONNECTION

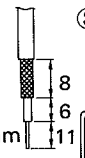
Detach the VHF antenna cable from the VHF antenna terminal of your TV set, and connect the cable to the ANTENNA terminal on the player.

If the end of the cable does not match the ANTENNA terminal, attach the accessory antenna adaptor, and plug the adaptor into the ANTENNA terminal.

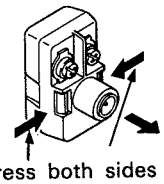
Attach the antenna adaptor

<For 75 Ω coaxial cable>

① Strip off the end of the cable as shown below.

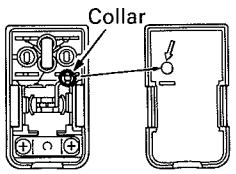


② Remove the cover.



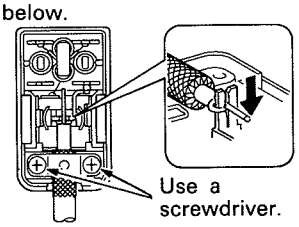
Press both sides at the same time.

③ Remove the ring. (To convert it into a 75Ω adapter.)

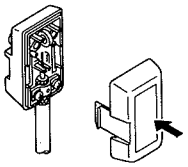


Place the removed collar on the ring holder on the cover.

④ Connect the cable as shown below.

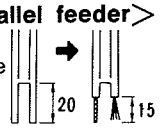


⑤ Put the cover back on.

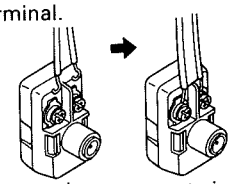


<For 300 Ω parallel feeder>

① Strip off the insulation of the feeder wire as shown below.



② Connect the wire to the 300Ω terminal.



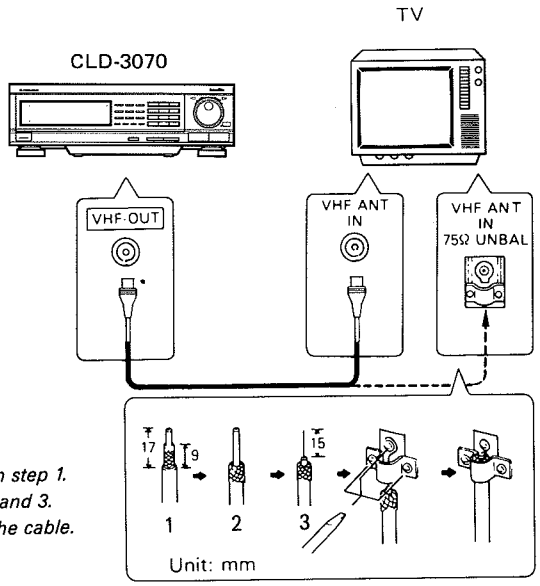
Loosen the screws, twine the wire around and tighten the screws.

2 CONNECTING TO YOUR TV SET

Connect the VHF OUT terminal of the player to the 75 Ω VHF antenna terminal of your TV set with the accessory RF antenna cable. If the VHF antenna terminal of your TV set is not an F type terminal, modify one end of the cable.

NOTE:

- *Push the plug in firmly. If the plug is not properly inserted, this may result in snow on the screen or noise.*
- *The shape of the VHF antenna input terminal and the method of connecting the antenna cable may differ from one TV set to another. For details, please refer to your TV instruction manual.*

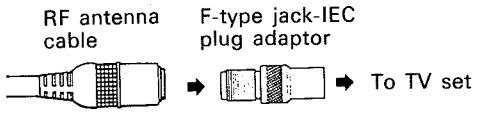


75 Ω coaxial cable preparation

1. Strip the end of the cable as shown in step 1.
2. Prepare the end as shown in steps 2 and 3.
3. Loosen the three screws and insert the cable.
4. Tighten the three screws firmly.

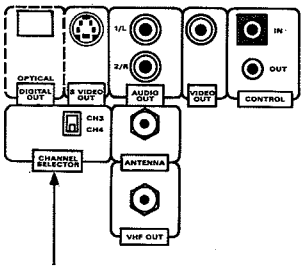
[FOR U.S. MILITARY MODEL]

If the VHF antenna input terminal of your TV set is an IEC terminal, install the accessory F-type jack-IEC plug adaptor to one end of the RF antenna cable and connect it to the TV set.



3 SET THE CHANNEL SELECTOR SWITCH

If channel 3 is not being used for broadcasts in your area, set the channel selector switch to channel 3. If channel 4 is not being used, set the switch to channel 4. The setting you choose will be the disc playback channel.



Set this switch to the empty channel.

4 CONNECTING TO YOUR STEREO AMPLIFIER

Connect the AUDIO OUT terminals of the player to the AUX or CD input terminals of your stereo amplifier.

NOTE:

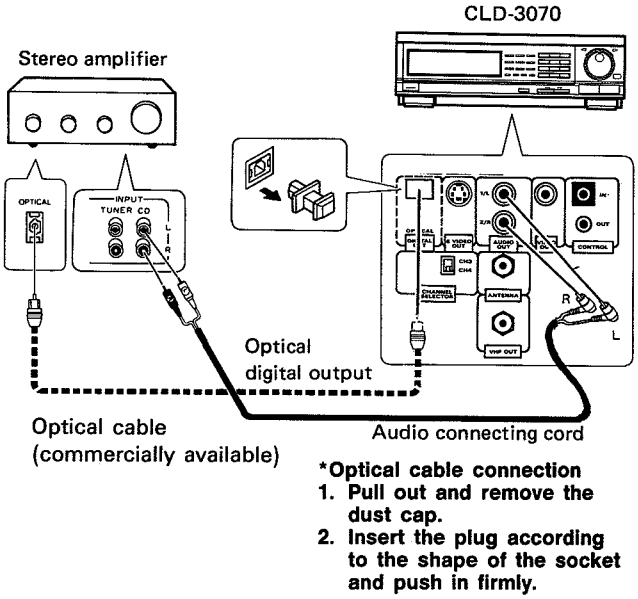
- *Do not connect these terminals to your amplifier PHONO input terminals.*

Stereo amplifiers connectable to the optical digital output terminal

When using the optical cable terminal, use the separately-sold optical cable. This applies only to equipment whose optical transmission module and optical receiving module are the same as that of this unit.

NOTE:

Refer to the operating instructions for the optical cable.

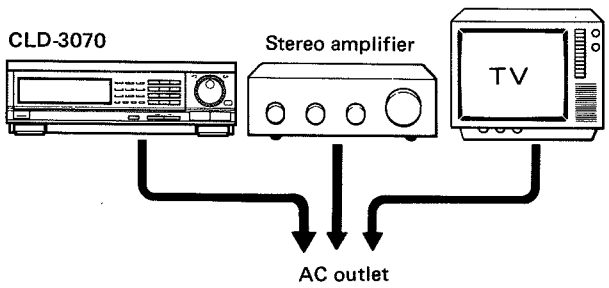


***Optical cable connection**

1. **Pull out and remove the dust cap.**
2. **Insert the plug according to the shape of the socket and push in firmly.**

5 PLUG THE POWER CORDS INTO AC OUTLET

Plug the AC power cords of the player, stereo amplifier and TV set into an AC outlet.



WHEN COMBINED WITH OPTIONAL PIONEER PROJECTION MONITOR (or COMPONENT DISPLAY):

Connect the VIDEO OUT terminal of the player to the video input terminal of the projection monitor (or component display), and connect the AUDIO OUT terminals of the player to the audio input terminals of the projection monitor (or component display).

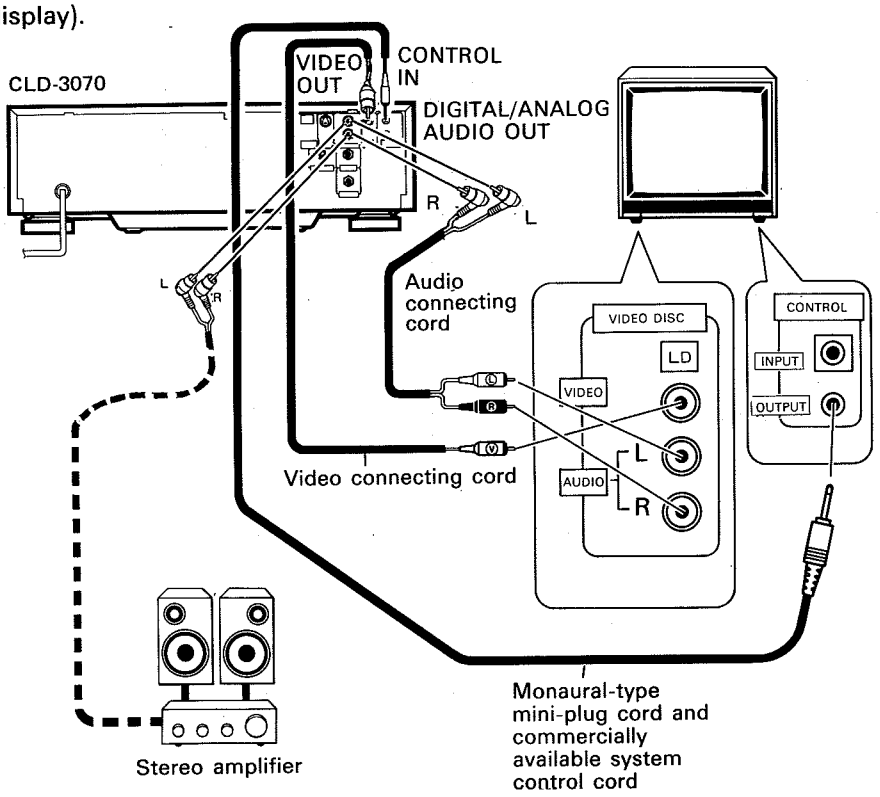
(System Control)

By connecting the control input terminal of the player to the remote terminal of the projection monitor (or component display), the system can be controlled by aiming the remote control unit of the player at the remote control receiver of the projection monitor (or component display).

- To use the CONTROL IN terminal, make use of a miniature phone plug cord.

Please also refer to the operating instructions for the projection monitor (or component display).

NOTE:
When system control connections have been made, the player cannot be directly controlled by the remote control unit. To operate the player, aim the remote control unit at the projection monitor (or component display).



PERFORMING SYSTEM CONTROL WHEN THE PLAYER IS COMBINED WITH A PRODUCT THAT HAS THE SR MARK:

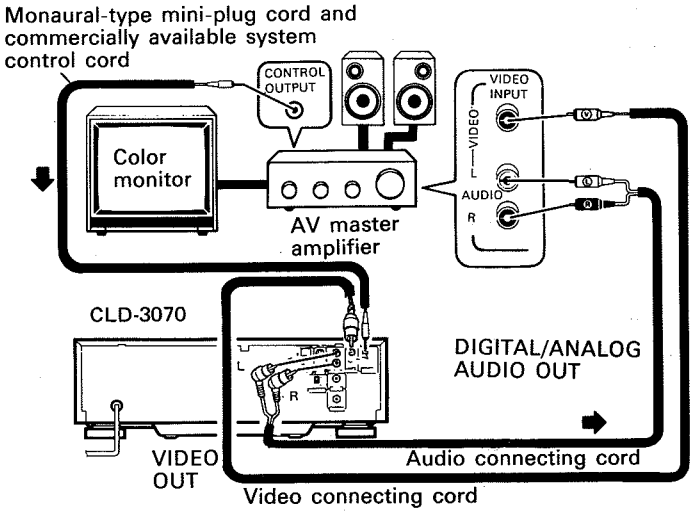
System control can be performed when the player is combined with an AV receiver or AV master amplifier (optional), which can provide centralized control of Pioneer products with the SR mark.

Connect the VIDEO OUT terminal of the player to the video disc video input terminal of the stereo receiver (or amplifier) and connect the AUDIO OUT terminals of the player to the audio input terminals of the stereo receiver (or amplifier).

Connect the CONTROL OUT (OUTPUT) terminal of the stereo receiver (or amplifier) to the CONTROL IN terminal of the player, using a Monaural-type mini-plug cord.

For details concerning the connection and operation methods, please refer to the operating instructions for your stereo receiver (or amplifier).

NOTE:
When a connecting cord has been connected to the CONTROL IN terminal, direct control of the player with the remote control unit is not possible. Operate the player with the remote control unit by aiming it at the AV receiver or AV master amplifier.



PANEL AND REMOTE CONTROL UNIT FACILITIES

[PLAYER FRONT PANEL]

SIDE A button
This function is limited to LaserVision discs.
When this button is pressed, side A is played. While side B (reverse side) is playing, press this button to play side A. This button can also be pressed to play side A only.

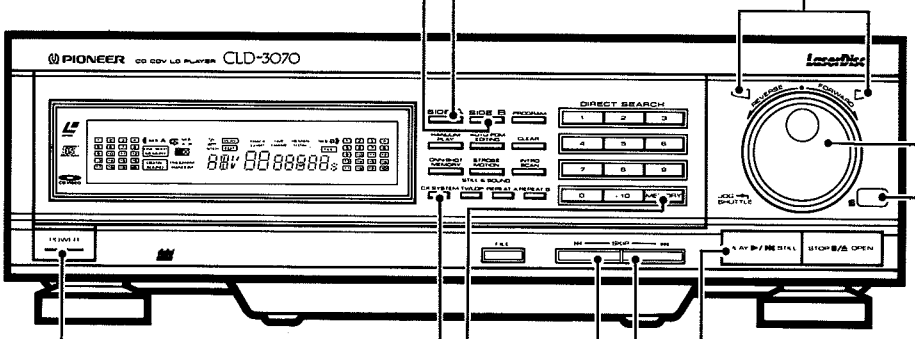
NOTE:
When the disc side is not specified, play starts from side A. For discs which only have an A side, only side A will be played. When the unit is stopped, side A play can only be started by pressing the SIDE A button. (It is not necessary to press the play button.)

SIDE B button
This function is limited to LaserVision discs.
Press this button to play side B when side A is playing.

NOTE:
When the unit is stopped, side B will not play even if the SIDE B button is pressed.

JOG dial
For LD and CDV (video portion) discs:
Depending on the turning speed of the dial, still, frame-by-frame, 1/2 speed, normal, and 2X speed playback are possible. When the dial is turned clockwise, the picture will progress forward, and when turned counterclockwise, the picture will progress reverse.
For CD and CDV (audio portion) discs:
Depending on the turning speed of the dial, low-speed and high-speed fast forward and reverse operations can be done with sound output.

PLAYBACK DIRECTION indicator
During Jog/Shuttle operations, the playback direction is displayed.
► : Forward playback.
◄ : Reverse playback.



POWER switch
Press this switch to turn the power to the unit ON/OFF.

CX SYSTEM button
This is the on/off button for the CX noise reduction system.
- CX is a trademark of CBS Inc.
  This player meets the CX EXPANDING SPECIFICATION.

MEMORY button
Press this button to use the data input to a file.

SKIP (|◄◄ , ►►|) buttons
- This is used to move to the head of the chapter for LaserVision Discs, or to the head of the track for Compact Discs or Compact Discs with Video.
- During program input of programmed playback, by using the SKIP ►►| or |◄◄ key (also used as PGM CORRECT key), the contents of a program already input can be altered.

REMOTE SENSOR window

PLAY/STILL button
- When pressed with a disc set on the disc table, the disc table will close and playback will begin.
- When pressed while in stop mode, playback will begin.
- Press when a chapter (track) program is to be started.
- Press to play the contents of a file.

For LD and CDV (video portion) discs:
- When pressed during a playback mode other than normal, the player will return to normal playback mode. When pressed while in normal playback mode, the player will enter still picture mode.

For CD and CDV (audio portion) discs:
When pressed during playback, the player will enter pause mode. To cancel pause mode, press the button again.

ONE-SHOT MEMORY button

For LD and CDV (video portion) discs:
When pressed during playback, that picture will be stored in memory. After playback ends, the picture stored in memory will be displayed. Even when discs are changed, the picture will remain on the TV screen. To view another disc, press the button again to clear the stored picture. If it is not cancelled, the stored picture will remain on the screen while only the audio of the inserted disc is played. You can select any picture to display on the TV screen and enjoy background video.

PROGRAM button

This button is used for programmed playback, which is playback in which the order of chapters for a LaserVision Disc, or the order of tracks for a Compact Disc or a Compact Disc with Video are changed.

DOOR/INDICATORS

When power is switched on, and OPEN/CLOSE button is pressed, the door opens downward, and at the same time, the disc table is expelled outward.

SHUTTLE ring

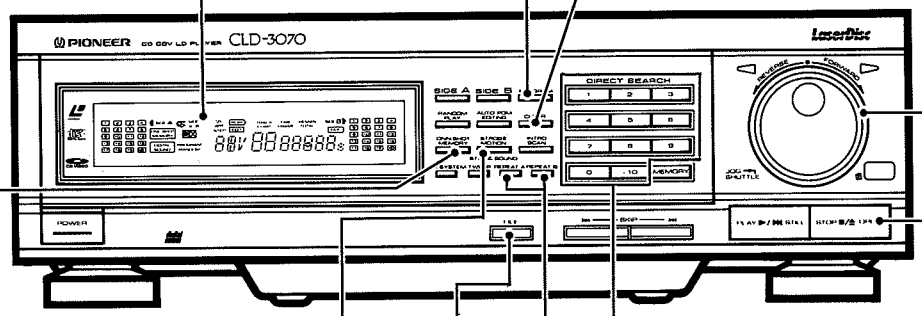
For LD and CDV (video portion) discs:
Depending on the ring's turning position, the fast forward speed can be increased to 2X, 5X, and 10X. (Fast reverse and playback are possible. However, fast forward and reverse cannot be done for CDV discs (video portion).

For CD and CDV (audio portion) discs:
When the ring is turned, fast forward and reverse operations with sound output are possible.

CLEAR button

The CLEAR button is used in the following cases:

- To stop repeat playback, to interrupt a search, or to correct input mode with the DIGIT buttons (When pressed twice, the value input mode will also be cleared.)
- To erase the last step of the program. (When pressed twice, the program input mode will also be cleared.)
- To terminate program playback.
- To terminate random playback.
- To cancel the Intro Scan.
- To erase the file contents.



STILL WITH SOUND/STROBE MOTION button

(For LD and CDV video portion)

- When pressed during playback, it will enter the still and sound playback mode (See page 31).
- When pressed during still and sound playback, it will enter the strobe motion playback mode (See page 31).

FILE button

Press this button to input data to the files or to execute a file.

DIGIT button (1 — 0, +10)

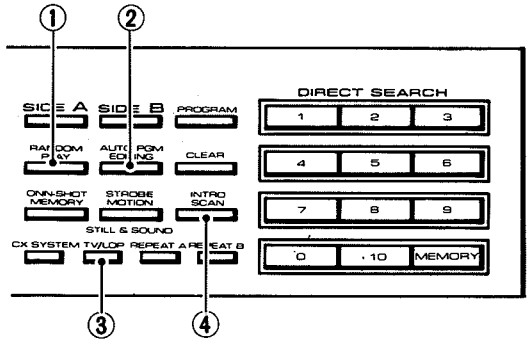
- This is used for search, track selection and program input.
- Use the DIGIT button during editing to designate the time in minutes. (This function is limited to Compact Discs and the audio portion of a Compact Disc with Video.)

REPEAT (A, B) buttons

These are used for repeat playback (See page 40).

STOP/OPEN (■/▲) button

This button is used to stop playback and remove the disc.
The first time this button is pressed stops the rotation of the disc. The second time this button is pressed extends the disc table from the player. If there is no disc on the disc table, the disc table is extended out from the player the first time this button is pressed.



① RANDOM PLAY button

This function is limited to Compact Discs and Compact Discs with Video.
Press the button to start random playback.

② AUTO PGM EDITING (Auto Program Editing) button

This function is limited to the Compact Discs and the audio portion of Compact Discs with Video.
Press the AUTO PGM EDITING button to program selections which can be played within the designated time.

③ TV/LDP button

When the VHF antenna is connected to the TV set via the player, this button switches between disc playback and VHF TV broadcast reception.

④ INTRO SCAN button

For CD and CDV discs:

The first 8 seconds of each selection are played successively. When the desired selection appears, press the PLAY/STILL button. After scanning all the selections, the normal playback starts again from the first selection.

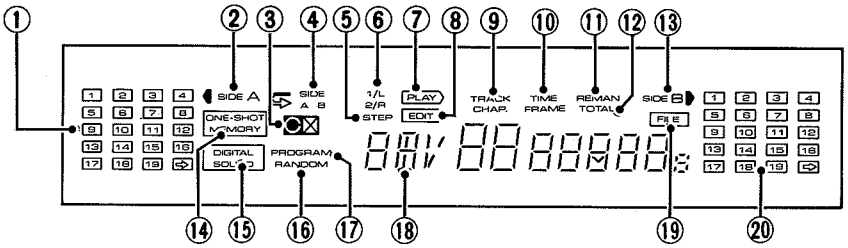
NOTE:
For CDV discs, the Intro Scan starts at the video portion and then scans the audio portion. After all the selections are scanned, the normal playback is repeated starting with the first track of the video portion.

For LD discs

For LaserVision Discs, approximately 8-second sections of the beginning of each chapter are played successively. While searching for the next chapter, the last picture from the previous chapter is displayed continuously. When the next chapter is located its pictures are displayed. When the desired chapter is reached, press the PLAY/STILL button. After all the chapters have been scanned, the regular display starts again from the beginning of the disc.

NOTE:
The Intro Scan function only operates for the data recorded after chapter number 0 or 1. Side A is recorded up to chapter number 10, so when the side B starts at chapter number 11 the Intro Scan function cannot be performed on the side B.

INDICATORS:



① Side A Visual Calendar : Only the selection numbers recorded on side A of a disc light (when a program is performed only the programmed selection numbers light). When the selections have been performed the numbers go out in order. If there are more than nineteen selections the → lamp lights.
* When playing discs which do not have TOC, the selection number lights during play. The programmed selections light when a program is performed and go out in order when the selection is finished. Chapter 0 of a LaserVision Disc is not included in this display.

When side A of a LaserVision Disc is selected, the label surface faces upwards and the side B label is placed downwards. The label (side A or B, 1 or 2) may not correspond depending on the setting position of the LaserVision Disc.

② SIDE A : This shows that side A is the side of the LaserVision disc being played.

③ CX : Lights up when the player's CX noise reduction system is operating.
CX is a trademark of CBS Inc. This player meets the CX EXPANDING SPECIFICATION.
- CX can be used only when LaserVision Disc is being played back.

④ (Repeat) : Indicates the type of repeat play during playback.
REPEAT play is selected with the REPEAT A or REPEAT B button.
SIDE : Indicates that one side or both side of the disc are set for repeat playback.
AB : Indicates when the repeat play of an interval between two points A and B is selected.
● The three items above are all displayed together for ALL SIDE repeat.

⑤ STEP : Indicates the program step number during program input.

⑥ 1/L, 2/R : Indicates the audio output channel. 1/L indicates the 1st audio channel or left channel; 2/R indicates the 2nd audio channel or the right channel.
When the power is turned on, both 1/L and 2/R light (in the STEREO mode).

⑦ PLAY : Lights during playback. Flashes when proceeding to playback and during search.

⑧ EDIT : Lights while editing is being performed.

⑨ TRACK
CHAP. : Indicates the track number being played back for the Compact Disc or Compact Disc with Video or the chapter number of the LaserVision Disc being played back.

⑩ TIME
FRAME : Indicates the elapsed playing time of Compact Disc track, or the elapsed time that the audio portion of a Compact Disc with Video has played. With LaserVision Discs, it indicates the frame number for standard play LaserVision Discs (CAV) and time number for extended play LaserVision Discs (CLV). It indicates the time number for the video portion of a Compact Disc with Video.

⑪ REMAIN : Indicates the time remaining from the present playing position to the end of play for Compact Discs or the audio portion of Compact Discs with Video.

⑫ TOTAL : Indicates total number of selections and total playback time (TRACK/CHAP.) on the playback side of the disc. With LaserVision Discs, chapter '0' is not included as one of the selections. Also, when playing a disc which does not have table of contents (TOC)*1, TOTAL is not displayed.

⑬ SIDE B : This shows that side B is the side of the LaserVision Disc being played.

⑭ ONE-SHOT MEMORY
: Flashes when the ONE-SHOT MEMORY button is pressed. Lights when playback ends and the picture stored in memory is output.

⑮ DIGITAL SOUND
: Lights while the digital audio is output from the AUDIO output on the back of the player.

⑯ RANDOM : Lights along with the (repeat) indicator during random play.

⑰ PROGRAM : Lights if a program is performed.

⑱ Disc indicator : ● This shows if the disc which is loaded is a CD, CDV or LD.
● This indicates if the television which is connected to the rear VHF output terminal is playing a disc or receiving television signals.
● This displays the number of program steps when the program is input.

⑲ FILE : This lights when a disc is played to indicate the file input, content display and file contents.

⑳ Side B Visual Calendar
: This is the Side B visual calendar. This lights just like the side A visual calendar.

*1: *Applies when the disc features a table of contents (TOC) for the selection numbers and playing times recorded on the disc.*

[REMOTE CONTROL UNIT]

*Refer to page 26 for inserting batteries in the remote control unit.
Keys for which no special instructions are given correspond to the same functions as the buttons of the player. (Refer to the section [PLAYER FRONT PANEL].)

The accessory remote control unit works commonly for LaserVision Discs, Compact Discs and Compact Discs with Video.
● The keys with white indications are use with only for LaserVision Discs. The keys with green indications are for use with only LaserVision Discs and Compact Discs with Video (video part). Keys in other colors are for common use by all three types of discs.

ONE-SHOT MEMORY key (See page 29.)
(For LD and CDV video portion)

JOG MODE key/Indicator
Turn on this key to use the remote control unit's JOG dial. The indicator will go on. The JOG dial will operate only when this indicator is on. When pressed again, it will turn off.

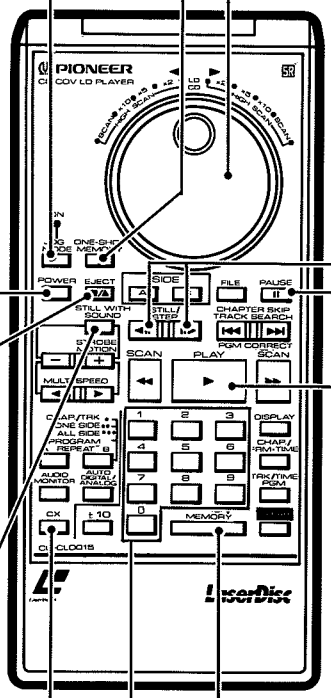
POWER key

EJECT (■/▲) key
This key is used to stop playback and remove the disc.
The first time this key is pressed stops the rotation of the disc. The second time this key is pressed extends the disc table from the player. If there is no disc on the disc table, the disc table is extended out from the player the first time this key is pressed.

STILL WITH SOUND/STROBE MOTION key
(For LD and CDV video portion)
- When pressed during playback, it will enter the still with sound playback mode. (See page 31.)
- Used together with the + or – keys, strobe motion playback can also be done. (See page 31.)

CX key
This is the on/off key for the CX noise reduction system.

DIGIT (0 — 9, +10) keys



JOG dial/SHUTTLE ring (See page 32.)

STLL/STEP (◄▮▮, ▮▮►) key
(For LD and CDV video portion)
- When either end of the key is pressed, the unit will enter frame-by-frame playback. Then, when the ▮▮► end is pressed, the picture will advance forward frame-by-frame. When the ◄▮▮ end is pressed, the picture will reverse frame-by-frame.
- When frame-by-frame playback for extended-play discs is done, the progression of the inner and outer periphery may differ. Also, immediately after the frame-by-frame playback progresses, there may be blurring.

PAUSE (▮▮) key
When this is pressed, the playback is temporarily interrupted. To release the pause mode, press the PAUSE key again.
(LD: See page 28, CD: See page 35.)

PLAY (▷) key
- Setting a disc on the disc table then pressing this key retracts the disc table into the player and begins play of the disc.
- Pressing this key when the disc is stopped starts playback.
- Pressing this key when player is in a pause mode restarts normal playback.
- Pressing this key after chapter programming starts play for that chapter program. (See Page 44 "Program Playback".)
- Press this key to play a disc according to a file.

SEARCH/MEMORY key
Search key function:
- Execution of search operation.
- For memory repeat operation.

Memory function:
- This is used when the file memory function operates.

MULTI-SPEED (◄ , ►) key
(For LD and CDV video portion)

- Pressing the ► side of this key during playback of a disc plays back the disc in the forward direction at the preset speed. Pressing the ◄ side of this key during playback of a disc plays back the disc in the reverse direction at the preset speed (with no audio). The speed is set with the –, + key.
  (See page 29 "Multi-speed".)

CHAPTER SKIP/TRACK SEARCH, PGM CORRECT (|◄◄,►►|) key

This key has the same functions as the SKIP buttons on the front of the players.

REPEAT (A, B) keys

These are used for repeat playback. (See page 40.)

AUDIO MONITOR key

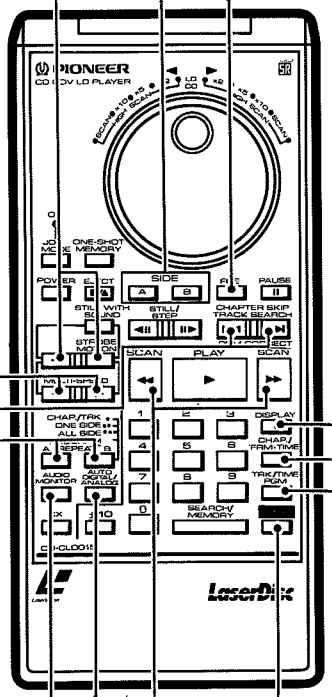
Switches the audio channel. When the player is first turned on, the audio is stereo and the 1/L and 2/R indicators both light.
Each time this key is pressed, the audio channel moves one step through the sequence: 1/L → 2/R → 1/L and 2/R (Stereo) → 1/L ...
(See page 27 "Audio Reproduction Playback".)

AUTO DIGITAL/ANALOG key

Pressing this key selects the audio output from the audio output terminals on the back of the player during playback of a LaserVision Disc with digital audio.
(See page 27 "Audio Reproduction Playback".)
This key has no effect for playback of Compact Discs, Compact Disc with Video or LaserVision Discs without digital audio.

⊟⊞ key

Use this key to set the speed of multi-speed playback (See page 29.), the transposition speed of strobe motion playback. (See page 31.)



SIDE keys

These keys have the same functions as the SIDE A and SIDE B buttons on the front of the player.

FILE key

This key has the same functions as the FILE button on the front of the player.

DISPLAY key

This is used to change the indication, the on-screen display and the indicator display.
Pressing the key once will get the on-screen display. Each time the key is pressed, the indicator will switch to the next display.
With disc which do not feature a table of contents (TOC), this serves as the ON/OFF key for the monitor display. (Refer to the 'INDICATORS'.)

CHAP./FRM·TIME, TRK/TIME key

This key is used to call up the part of the disc that you wish to see or listen to (search).
(LD: See page 33. CD: See page 38.)

PGM Key

This key has the same functions as the PROGRAM button on the front of the player (See page 44).

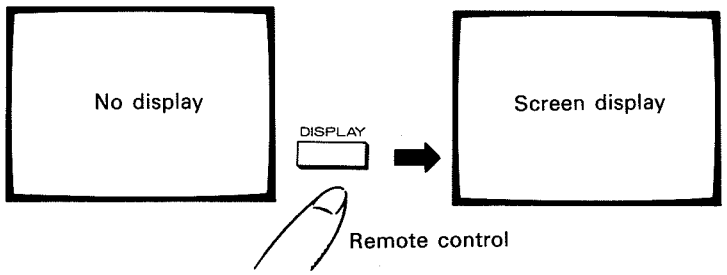
CLEAR key

This key has the same functions as the CLEAR button on the front of the player (See page 17.)

SCAN (◄◄ , ►►) keys
These keys are used during playback.

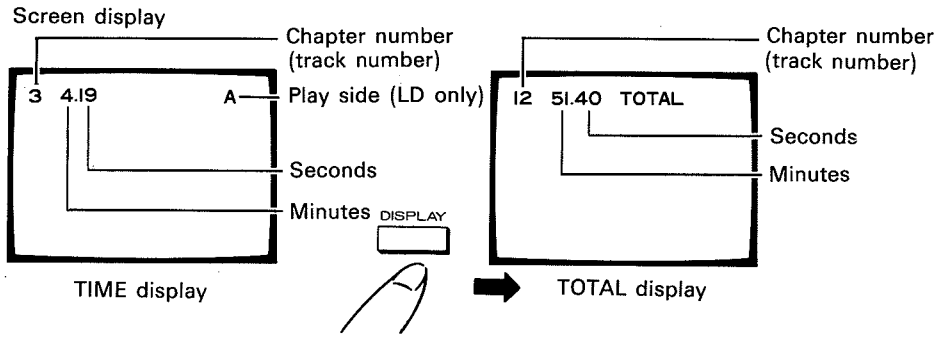
Fast forward or reverse operation is performed while the key is being depressed.
There are two speeds. For two seconds after pressing the key, the operation will be in low speed. After that, it will be in high speed.
However, when the video part of a CDV is played, the speed will not change. It will operate only at low speed while the key is depressed.
►► : Fast forward operation.
◄◄ : Fast reverse operation

DISPLAY SWITCHING

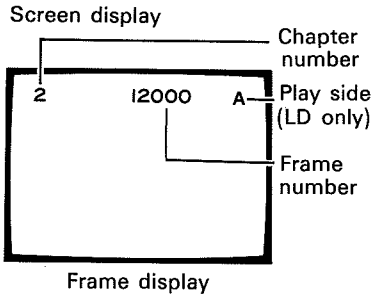


- When this button is pressed the first time, the screen is displayed.
- Press to alternately display the TIME and TOTAL when a TOC LD (CLV) or CDV (video portion) is set. Press again to turn off the screen display.
- Press to display the LD (CAV) chapter number and frame number. Press again to turn off the screen display.
- Press to alternately display the TIME, REMAIN and TOTAL when a CD or CDV (audio portion) disc is set. Press again to turn off the screen display.
- This switches between the indicators on the front of the player and the screen display.

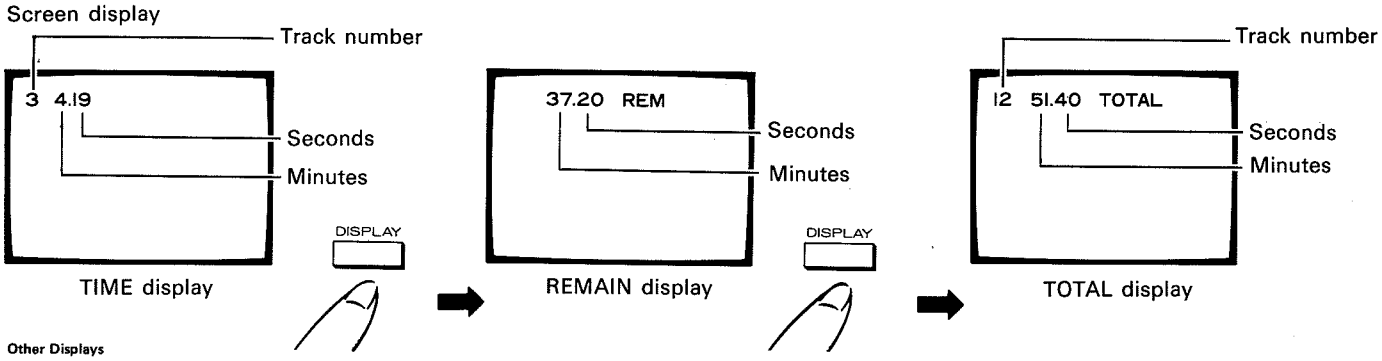
LD with TOC (CLV) and CDV (video part)



LD (CAV)



CD, CDV (audio part)



Other Displays

Lights – Flashes	Function	Lights – Flashes	Function
PLAY	Play	RND	Random play
STOP	Stop	P. RND	Program random play
PAUSE	Pause	PGM	Program input and play
SEARCH	Search	PGM. R	Program repeat play
REPEAT	Repeat play	ST.	Stereo
MEM. A	A-point memory	1/L	Main audio/Left channel
A–B. R	A–B repeat	2/R	Sub audio/Right channel
CHP. R	Chapter repeat	DIGITAL	Digital audio
TRK. R	Track repeat	ANALOG	Analog audio
SID. R	Side repeat	ONE–SHOT	One-shot memory
ALL. R	Both side repeat	FILE	File
INTRO	Intro Scan		

NOTE:
TIME/REMAIN/TOTAL meanings
TIME: Selection number and play time
REMAIN: Remaining time on disc from present location
TOTAL: Total number of selections recorded on disc and play time (For a LaserVision Disc, the number of selections and play time are only indicated for one side).

BASIC OPERATION (FOR PLAYBACK OF LASERVISION DISCS AND COMPACT DISCS)

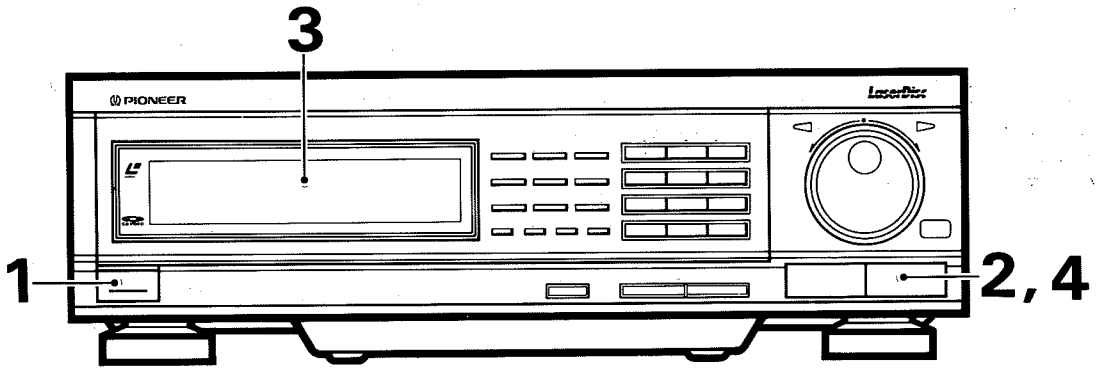
[Preparations]

- **Make sure that the transit screw has been removed.**
- **Turn on your television, and set it to a channel (3 or 4) which is not being used for broadcasting.**
  (When using a TV set with a video input terminal, select video input.)
  When using a TV monitor, switch on power to the TV monitor.
- **Switch on power to your stereo system.**

BEFORE BEGINNING PLAYBACK, BEWARE OF EXCESSIVE INPUT.

A characteristic of the digital sound recorded on Compact Discs, Compact Discs with Video and LaserVision with Digital Sound Discs, is a very low noise level combined with a very large dynamic range. As a result, be extremely careful when playing back these discs and adjust the sound volume properly in order to prevent damage to your speakers from an excessive input.

TO BEGIN PLAYBACK



1. Press the POWER button to switch on the power.

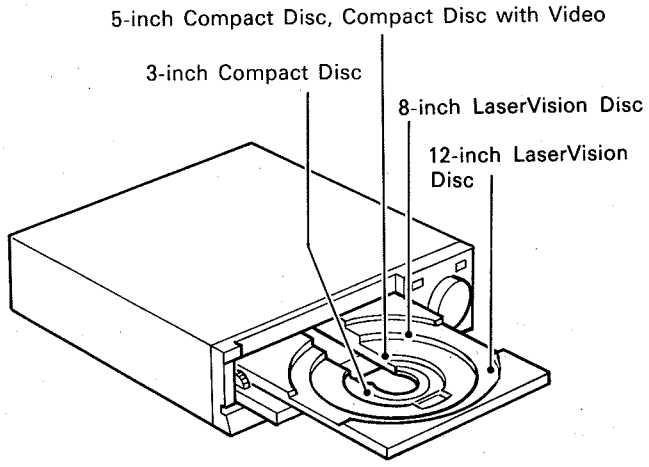
■ The screen of the TV set or TV monitor will turn blue.

2. Press the STOP/OPEN (■/▲) button.

■ The door will open, and the disc table will emerge a specified distance. The disc table will not open or close if power is not turned on.

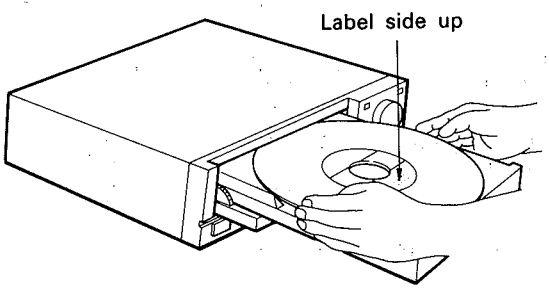
ABOUT THE SHAPE OF THE DISC TABLE

When setting each size of disc, set the disc so that the edge is properly aligned with the appropriate guides shown in the figure.



3. Load the disc

■ Be sure to load the disc so that the label of the side you wish to play is facing up, in the same way as for audio record.



NOTE:

- *Only one disc can be loaded as any one time. Loading a LaserVision Disc, a Compact Disc or a Compact Disc with Video on top of one another may result in breakdown, or in scratching of the discs. Please only load one disc at a time.*

- *Use 3-inch CD single discs without an adapter.*
- *Be careful not to touch the playing (iridescent) side with your hands.*
- *Insert CD and CDV discs so the label side faces up.*
- *Insert LD single-side discs so the label side faces up.*
- *Use the thin 8-inch discs without an adapter.*

4. Press the PLAY/STILL (►/►I◄) button.

The disc table will close and playback will start. (Auto start)

- When in program input mode, the disc table will close, however, auto-start will not operate. Input the program and press the PLAY/STILL (►/►I◄) button.

Compact Discs with video will be played from the first video track. After the video portion is finished playing, the first audio track will start playing. After the audio portion is finished playing, the unit will enter stop mode.

- A dual-side LD plays side A, side B and then stops automatically.

NOTE:
Cautions on using single-side LD discs
When the play is started by the PLAY/STILL or DIGIT button, after the play is finished, it takes a certain amount of time elapses before the player can attempt to play side B. Therefore, press the SIDE A button to play a single-side LD.

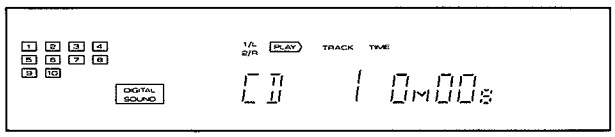
Using the SIDE A and SIDE B buttons

These buttons only operate when playing an LD.

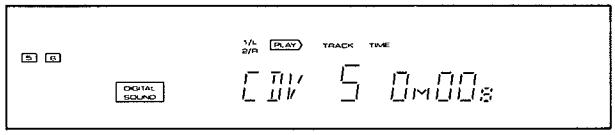
● During side A play	[SIDE B]	Play starts at the beginning of side B.
● During side B play	[SIDE A]	Play starts at the beginning of side A.
● When the player is stopped	[SIDE A]	Only side A is played.
● When the player is stopped	[SIDE B]	Playing only side B or starting from side B is not possible.

Display examples play starting time

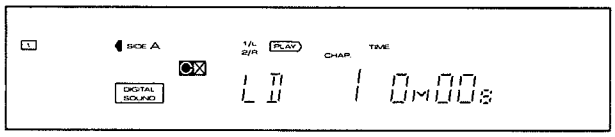
CD



CDV



LD (CLV)



TO STOP PLAYBACK

When double sides of a disc is played to the end, playback automatically stops and the disc stops rotating.

When playback of the CDV video portion ends, if the ONE-SHOT MEMORY button has not been pressed, the selected picture will be automatically displayed on the screen. Playback of the audio portion will begin.

When playback of the audio portion ends, this picture will be cleared automatically.

To stop playback part way through a disc, proceed as follows.

1. Press the STOP/OPEN (■/▲) button on the player, or the EJECT key (■/▲) on the remote control unit.

Pressed once
: The disc stops rotating.

Pressed twice
: The disc stops rotating and the disc table emerges.

2. Remove the disc

■ Return the disc to its jacket or case, and store it vertically.

3. Press the PLAY/STILL (►/►I◄) button.

■ The disc table is retracted into the player.

4. Press the power button again to switch off the power when the indicators flash OFF.

NOTE:
Do not switch off the power with the disc table out of the player.
A strong force applied to the disc table while it is out of the player can damage it. Depending on where the player is, there may also be a danger of the player falling. Always retract the disc table back into the player except when taking out or mounting a disc.
When moving or transporting the player be sure to remove the disc, return the disc table and turn the power OFF. After the OFF indicator on the player stops flashing, disconnect the AC cord from the outlet.

CAUTION
- *Do not place anything on the disc table other than a disc.*
- *Do not open the door with your hands during playback.*
- *Do not tilt or lift up the player during playback, as this could result in damage to the disc.*
  If you need to move the player, first take out the disc, switch off the power after the indicator stops flashing, and remove the plug from the power outlet.
- *If the picture is not clear, adjust the fine tuning of your TV set.*
- *If fingerprints or dirt adheres to the playback surface of the disc, the video and audio quality will be impaired. Before loading a disc, clean the disc's bottom surface if it is dirty (this is the opposite side to the label side, but it is the side with the signal which will be played back).*
- *Be careful not to pinch your fingers between the player and the disc table.*

TV CHANNEL ADJUSTMENT (WHEN THE PICTURE IS NOT CLEAR)

Confirm that the CHANNEL SELECTOR switch on the rear panel of the player, is set to the same channel as the TV channel used for disc playback.

1. **Set your TV set to the channel (3 or 4) used for disc playback.**
2. **Start disc playback.**
3. **Adjust the fine tuning of your TV set so that a clear picture is obtained.**

(The method of fine tuning differs from one TV set to another. Please refer to the operating instructions for your TV set.)

WHEN STRIPES OR NOISES APPEAR ON THE SCREEN, PLEASE KEEP VHF ANTENNA CABLE AWAY FROM POWER CORD.

Last Memory Function

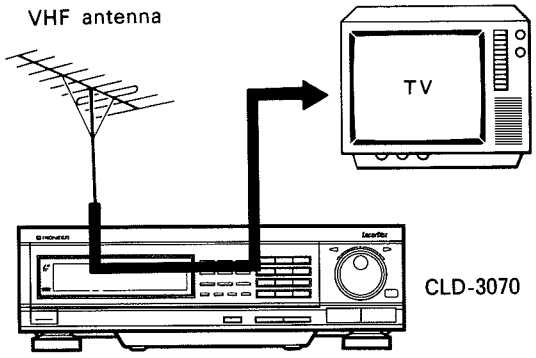
When the POWER switch is pressed to switch the power OFF while a LaserVision Disc is playing, the address of the current play location is recorded in memory, the disc is stored in this position and then the power is switched OFF.

After the power switch is pressed and the power is turned ON, if the PLAY/STILL button or the PLAY key on the remote control is pressed, play starts slightly before the position where the previous play was interrupted. Since the play continues from the last location which was displayed, even long selections, such as a movie, can be viewed in short sections.

TO WATCH A TV BROADCAST

When a VHF TV antenna has been connected to your TV via the player's ANTENNA terminal, in accordance with the connection example given in these instructions (page 12), TV broadcasts can be received normally by proceeding in one of the following two ways:

- **By switching off power to the player**
  Before switching off power, first perform the steps in "TO STOP PLAYBACK", and stop disc playback.
- **By making the TV indicator on the front panel turn on. (Use the TV/LDP button on the front of the player.)**
  In either case, the signals from the VHF antenna are fed to the TV set via the player.



Press the TV/LDP button on the front of the player to turn on the indicator, or turn off power.

NOTE:

In an area where the TV broadcast signal is weak, slanting stripes may appear on the TV screen when the TV/LDP button is pressed to receive a TV broadcast. This does not always indicate a problem. The stripes should be eliminated by turning off power to the player.

In such cases, or when you wish to watch TV for long periods of time, we recommend that you turn off the power switch of the player.

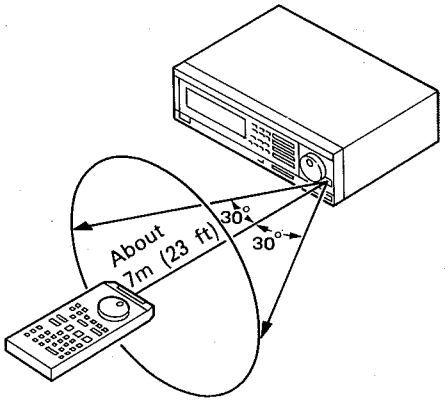
WHEN USING A TV SET WITH VIDEO AND AUDIO INPUT TERMINALS

When using the video input terminal of your TV, switch to the broadcast using the controls of your TV.

REMOTE CONTROL OPERATIONS

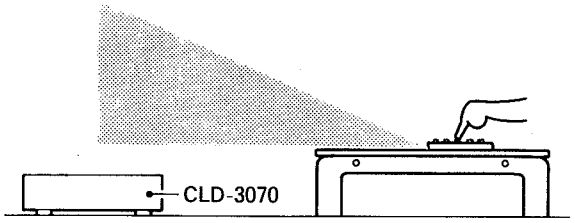
When operating the remote control unit, point the unit's infrared signal transmitter at the remote control receiver (REMOTE SENSOR) on the front panel of the player. The remote control unit can be used within a range of about 7 meters (23 feet) from the remote sensor, and within angles of up to about 30 degrees.

If a plug is connected to the CONTROL IN terminal at the rear of the player, remote control operations cannot be done with the remote control unit aimed at the player's remote control sensor. Aim the remote control unit at the AV master amplifier or the component display's sensor instead.



NOTE FOR USING THE REMOTE CONTROL UNIT

- *If there is any obstacle between the remote control unit and the player, or if the unit is held at too large an angle relative to the front panel of the player, the signal from the remote control unit may fail to reach the remote sensor.*



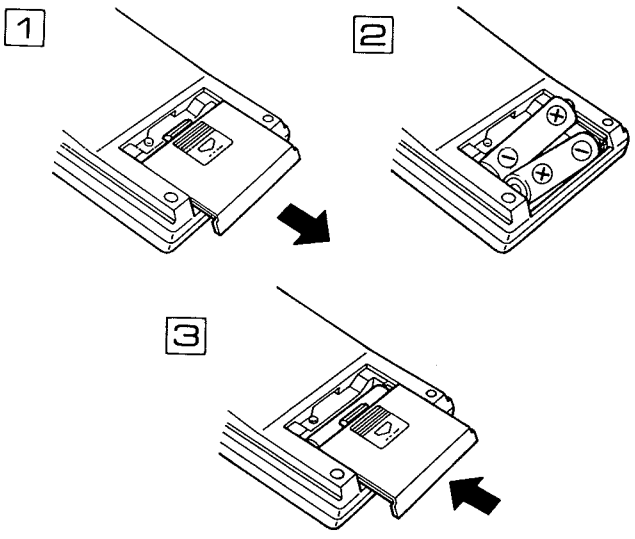
- *If the player is operating in the vicinity of other appliances generating infrared rays, or if other remote control devices using infrared rays are used near the player, the player may operate improperly. Conversely, if the player's remote control unit is operated in the vicinity of other appliances which use an infrared remote control device, the other appliance may operate improperly. If this should happen, change the place of installation so that improper operation does not occur.*
- *If the range of operation of the remote control unit becomes too short, replace the batteries.*
- *When the unit is not to be used for a long period of time (more than one month), remove the batteries to prevent them from leaking inside the compartment. If leakage occurs, wipe up the liquid inside the compartment and replace the batteries with new ones.*
- *Do not place books or other objects on the remote control unit, since they might depress the buttons and run down the batteries.*
- *The remote control unit's chapter skip (track search), multi-speed, STILL/STEP keys, etc., are see-saw switches. Pressing the middle of these keys will have no effect.*

PUTTING BATTERIES INTO THE REMOTE CONTROL UNIT

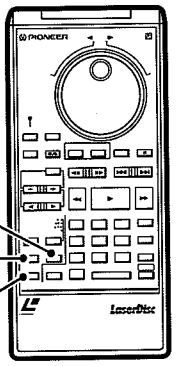
1. Open the battery compartment cover on the back of the remote control unit. The cover should open easily if you press on it with your thumb while sliding it in the direction of the arrow.
2. Take out the two accessory size "AA" (IEC R6P) dry batteries, and insert them into the battery compartment in accordance with the indications in the compartment.
3. Close the cover of the battery case.

Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

A. Always insert batteries into the battery compartment correctly matching the positive (+) and negative (–) polarities, as shown by the display inside the compartment.
B. Never mix new and used batteries.
C. Batteries of the same size may have differing voltages, depending on brand. Do not mix different brands of batteries.
D. Both rechargeable and non-rechargeable batteries are available. Be sure to use your batteries in accordance with the caution labels affixed to them.



LASERVISION DISC PLAYBACK FUNCTIONS



AUDIO REPRODUCTION
PLAYBACK OF STEREO DISCS

When power is turned on, the player goes into stereo playback mode (audio 1/L and 2/R indicators both light), and disc playback is performed in this mode. If either of the 1/L or 2/R indicators is off, press the AUDIO MONITOR key on the remote control unit to make both indicators light.
The sound played back via TV set connected to the VHF output terminal, will not be in stereo.

BILINGUAL discs, MULTI AUDIO discs

Press the AUDIO MONITOR key until the audio indicator for the channel you want to listen to lights up and the audio indicator for the other channel goes out. The audio selection moves through the sequence: 1/L → 2/R → 1/L and 2/R (stereo) → 1/L ...

SOUND SELECTION WITH THE AUDIO MONITOR KEY

AUDIO MONITOR key	VHF Output Signal	Audio Output Terminal		Indicators on display	Screen display
		1/L	2/R		
AUDIO MONITOR	Mixture of 1/L and 2/R	1/L	2/R	1/L 2/R	ST
AUDIO MONITOR	1/L	1/L	1/L	1/L	1/L
AUDIO MONITOR	2/R	2/R	2/R	2/R	2/R

CX SYSTEM
(The CX SYSTEM button is effective only for analog sound)

When the CX system indicator does not light when playback of a disc with the CX mark begins, this indicates that the disc does not perform CX switching automatically. Please press the CX button on the front of the player, so as to make the CX system indicator light.

Some discs have codes recorded on them which switch the CX system on and off automatically. When these discs are played back, switching of the CX system is carried out automatically. Also, once automatic switching has been carried out, switching with the CX key cannot be performed.

CX is a trademark of CBS Inc.
This player meets the CX EXPANDING SPECIFICATION.

NOTE:
When playing back a disc without the CX mark, always switch the CX system off. If a disc without the CX mark is played back with the CX system on, the sound will not play back naturally.

DISCS WITH DIGITAL AUDIO

When a disc with digital audio is played, the DIGITAL SOUND indicator on the front panel lights up. The audio signals output from the audio output terminals on the back of the player can be selected with the AUTO DIGITAL/ANALOG key on the remote control unit. (When the power is first switched on, the player is in auto digital mode.)

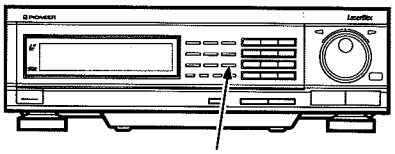
[Switching the audio signals with the AUTO DIGITAL/ANALOG key]

Mode	Screen display	Audio output	
		AUDIO OUT	VHF
AUTO DIGITAL	DIGITAL	Digital	Digital
ANALOG	ANALOG	Analog	Analog

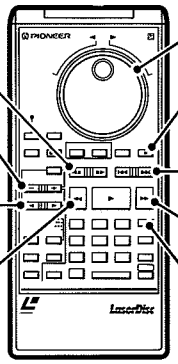
- Digital audio output can be switched between 1/L, 2/R, and stereo with the AUDIO MONITOR key in the same manner as analog audio output. Switching the channel for analog audio output also switches the channel for digital audio output.
- Audio can be switched over between stereo, 1/L, 2/R for Compact Discs and Compact Discs with Video.
- Switching is not possible because Compact Discs and Compact Discs with Video produce digital sound only.

LASERVISION DISC PLAYBACK FUNCTIONS

The same operation can be done for the video portion of compact discs with video.



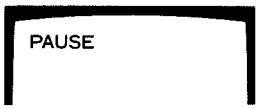
INTRO SCAN button



PAUSE

Pressing PAUSE key causes the video and sound to disappear for temporary interruption of playback. The screen becomes blue, and the word "PAUSE" appears. Pressing the key again causes playback to resume from the point of interruption.

- While a Compact Disc or the audio portion of a Compact Disc with Video is playing, a pause can be performed by pressing the PLAY/STILL button in front of the player.



NOTE:

- *If the screen is displaying the chapter and frame or time, that display takes priority and "PAUSE" is not displayed.*
- *When the PAUSE key is pressed during search operation, the player pauses when the search ends.*
- *When the pause mode is cancelled while playing an extended play disc, the point from which playback resumes may differ slightly from the point where playback was interrupted.*

INTRO SCAN

This function can only be used with LaserVision Discs that have recorded chapter numbers.
If the INTRO SCAN button is pressed, approximately 8-second sections of the beginning of each chapter are played successively. While the player searches for the next chapter, the last picture from the previous chapter is displayed continuously. When the next chapter is located, its pictures are displayed. When the desired chapter is reached, press the PLAY/STILL button on the front of the player or the PLAY key on the remote control unit. After all the chapters have been scanned, normal playback starts at the beginning of the disc.

NOTE:
The Intro Scan function only operates for the data recorded after chapter number 0 or 1. Side A is recorded up to chapter number 10, so when the side B starts at chapter number 11, the Intro Scan function cannot be performed on side B.

SCAN

After playback has begun, pressing either key (►► or ◄◄) causes fast forward or fast reverse playback. The shuttle ring can also be used.
►►: Fast forward
◄◄: Fast reverse
The scan speed may be one of two speeds. For about two seconds after the key is pressed, the scan speed is fairly slow, after that, it changes to high speed.

- The SCAN speed does not change to high speed in the video portion of Compact Discs with Video.

NOTE:
The sound does not play during a scan.

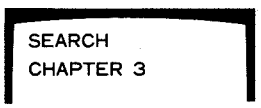
CHAPTER SKIP

(Discs on which chapter numbers have been recorded)

This function causes the player to jump to the beginning of the next chapter, or to jump to the beginning of the chapter currently being played.
This operation can be carried out with either the CHAPTER SKIP key on the remote control unit or with the SKIP buttons on the player.
After playback has begun,

Pressing the ►►| side: Player skips to the beginning of the next chapter.
Pressing the |◄◄ side: Player skips to the beginning of the chapter currently being played.

(Skipping to Chapter 3)



If the key is repeatedly pressed, the player skips to the beginning of chapters in accordance with the number of times the key is pressed.

NOTE:

- *If chapter skip operation is performed during repeat playback, the repeat mode is cancelled.*
- *When chapter skipping in the reverse direction, be careful of the number of times you press the key. The first time you press the key, the player jumps to the beginning of the currently playing chapter. The second time you press the key, the player jumps to the beginning of the preceding chapter.*
- *In the case of discs on which chapter numbers have not been recorded, the chapter skip function cannot be used.*
- *If skipping is performed beyond the range of the recorded chapter numbers for LaserVision Discs without a table of contents, the player enters the play mode at the end of the discs, then stops playing back approx. 10 secs. later. If you skip to a number which is greater than the recorded number, please reverse direction within 10 seconds.*

STILL/STEP

If the PLAY/STILL (▶/▶I◀) button is pressed during playback, still frame playback is performed.

Pressing either end of this key causes still frame playback. Following this, each press of the II▶ end of the key causes playback to advance one frame, and each press of the ◀II end of the key causes playback to reverse one frame.

To cancel still frame playback, press the PLAY/STILL (▶/▶I◀) button on the player or PLAY (▶) key on the remote control unit.

*** In the case of rapidly changing scenes, it may not be possible to obtain completely still frames. This is not a fault of the player or disc.**

AUTOMATIC PICTURE STOP

Some discs have special signals recorded on them called picture stop codes. When such discs are played at either normal speed or in multi-speed (with the exception of double and triple speed) mode, the player automatically stops at the frames specified by the picture stop codes, and plays back a still frame.

ONE-SHOT MEMORY
(Playing other discs while viewing any desired still picture)

The player stores a picture in memory. When playback ends, the stored picture is called up and displayed on the TV screen. Even when playback is stopped, the picture will remain on the screen. This is suitable when changing discs, etc. While another disc is playing, the picture stored in memory will remain on the screen. This allows enjoyment of background video while playing a compact disc or other discs.

<Operation>

1. During normal playback, press the ONE-SHOT MEMORY button.

- The picture at the moment (address) the button is pressed will be stored in memory.
- The indicator's ONE-SHOT MEMORY will flash. The "ONE-SHOT" picture appears on the TV screen for a few seconds.

2. Stop normal playback.

- The address will be searched and the corresponding picture will be stored in memory and then called up on the screen.
- The indicator's ONE-SHOT MEMORY will light. Even when the disc is changed, the picture on the TV screen will not change. To play another disc, press the ONE-SHOT MEMORY button again to cancel the picture.

For compact discs with video, the following can also be done:

1. While the video portion is playing, press the ONE-SHOT MEMORY button.
2. A search is performed directly for the audio part.
   - The stored picture of the video portion will be displayed and the audio portion will playback.

NOTE:

- *For One-shot Memory, since the address is recorded, the picture displayed may differ slightly from the one stored in memory. Also, for discs without the recording of seconds, an entirely different picture may be displayed. (See page 34.)*
- *When the stored picture is displayed, the TV screen will not display any characters. The player's display indicator can be switched over with the remote control unit's DISPLAY key.*
- *When the ONE-SHOT MEMORY button is pressed while side A is playing and the address is stored in memory. After side A play is finished, the side A screen remains displayed and only the side B sound is played. Press the ONE-SHOT MEMORY button again to watch the side B screen.*

MULTI-SPEED

With this function you can choose from a fast 3-times normal playback speed to an ultra-slow, one frame every 3 seconds, allowing you to enjoy playback at whatever speed you desire.

During multi-speed playback, sound cannot be output.

[Executing multi-speed]

Pressing the multi-speed key:

On the ▶ side: Plays the disc forward at multi-speed.

On the ◀ side: Plays the disc reverse at multi-speed.

[Speed Selection]

When power is turned on "1/4" is selected.

Using the "+" and "–" keys, selection of 9 speeds is possible.

During the time the "+" and "–" keys are being pressed, the speed is displayed on the screen.

LASERVISION DISC PLAYBACK FUNCTIONS

"–" Key	Screen Display	Speed	"+" Key
⇩	× 3	3-times play mode speed	⇧
	× 2	2-times play mode speed	
	× 1	Same as play mode speed	
	1 / 2	1/2 play mode speed	
	1 / 4	1/4 play mode speed	
	1 / 8	1/8 play mode speed	
	1 /16	1/16 play mode speed	
	STEP1	Plays one frame every second	
	STEP3	Plays one frame every 3 seconds	

The selected speed is remembered even when another playback mode is selected. When playback is stopped, the speed is restored to 1/4 of play mode speed.
During playback modes other than multi-speed mode, the player can also accept "+" and "–" key operations, so the speed of multi-speed playback can be set in advance.
When the multi-speed operation keys (◄ , ►) are pressed during chapter number and frame/time number display, the speed is displayed.

[Ending multi-speed play]

To end the multi-speed play, press the PLAY (►) key.

CHAPTER NUMBER AND FRAME/TIME NUMBER DISPLAY

LaserVision Discs have chapter numbers, frame numbers and/or time numbers recorded on them, at the time when the video and sound are recorded.
Each time the DISPLAY key is pressed, this information is alternately displayed and erased on the screen.

Chapter numbers (Standard play and Extended play discs)

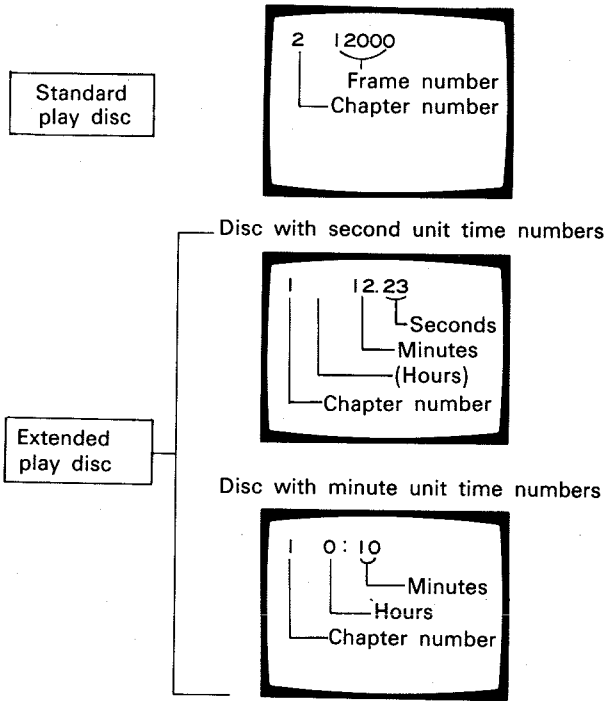
These indicate divisions within a disc program, and correspond to the chapter numbers in a book.
Some discs do not have chapter numbers recorded on them. In the case of such discs, chapter numbers are not displayed.

Frame numbers (Standard play discs)

Frame numbers are allocated one by one to each frame from the start of the disc program. These correspond to the page numbers in a book.

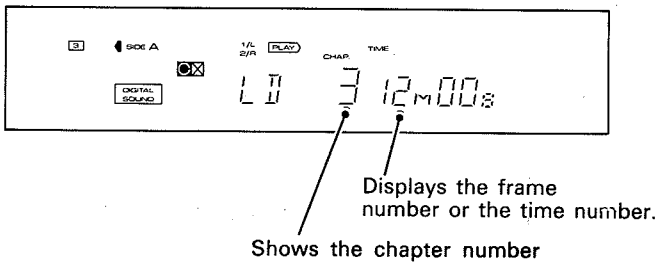
Time numbers (Extended play discs)

These represent the elapsed time from the start of the disc for normal playback mode.
In the case of some discs time numbers are recorded with minutes as the smallest units, while with other discs, the time numbers are recorded with seconds as the smallest units.

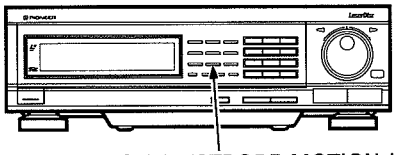


[Player display]

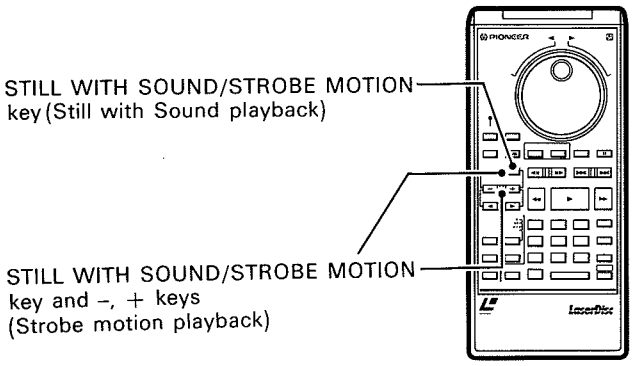
Example: extended play disc



STILL WITH SOUND, STROBE MOTION



STILL WITH SOUND/STROBE MOTION button



STILL WITH SOUND PLAYBACK

You can turn any frame into a still picture and view it while enjoying the sound.

<Operation>

Press the STILL WITH SOUND/STROBE MOTION button on the player or the STILL WITH SOUND/STROBE MOTION key on the remote control unit to view the desired frame in the Still picture mode.

<Function>

The same picture is shown, but the sound is reproduced as normally. Since the same picture is displayed, this feature can also be enjoyed during repeat and programmed playback while you listen to the sound.

At this time, chapter, frame/time displays (operated by the DISPLAY key) on the screen and the chapter, frame/time in the front panel display indicates audio playback position.

CANCELLING STILL WITH SOUND

When the PLAY key is pressed, the player will enter normal playback mode.

STROBE MOTION PLAYBACK

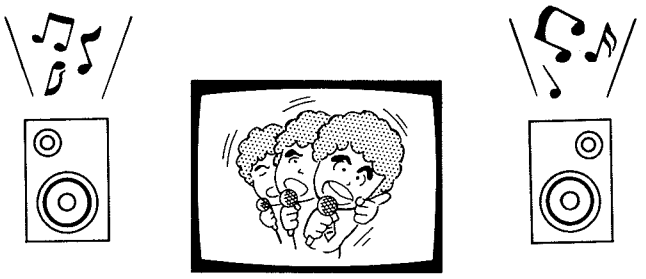
Still pictures are shown at designated intervals (variable) in Still with Sound mode.

<Operation>

Press the STILL WITH SOUND/STROBE MOTION button on the player or the STILL WITH SOUND/STROBE MOTION key on the remote control unit during Still with Sound playback.
Press the – or + key during Still with Sound playback.

<Function>

Still pictures will be shown one after the other at the chosen time intervals while normal sound reproduction takes place.



By pressing the – or + key, a total of seven types of intervals can be selected.

– : The intervals become longer

+ : The intervals become shorter

"–" key	Screen display	designated interval	"+" key
	1/1	Every other frame	
	1/2	Every 2 frames	
	1/4	Every 4 frames	
	1/8	Every 8 frames	
	1/16	Every 16 frames	
	STEP 1	Every 1 sec.	
	STEP 3	Every 3 secs.	

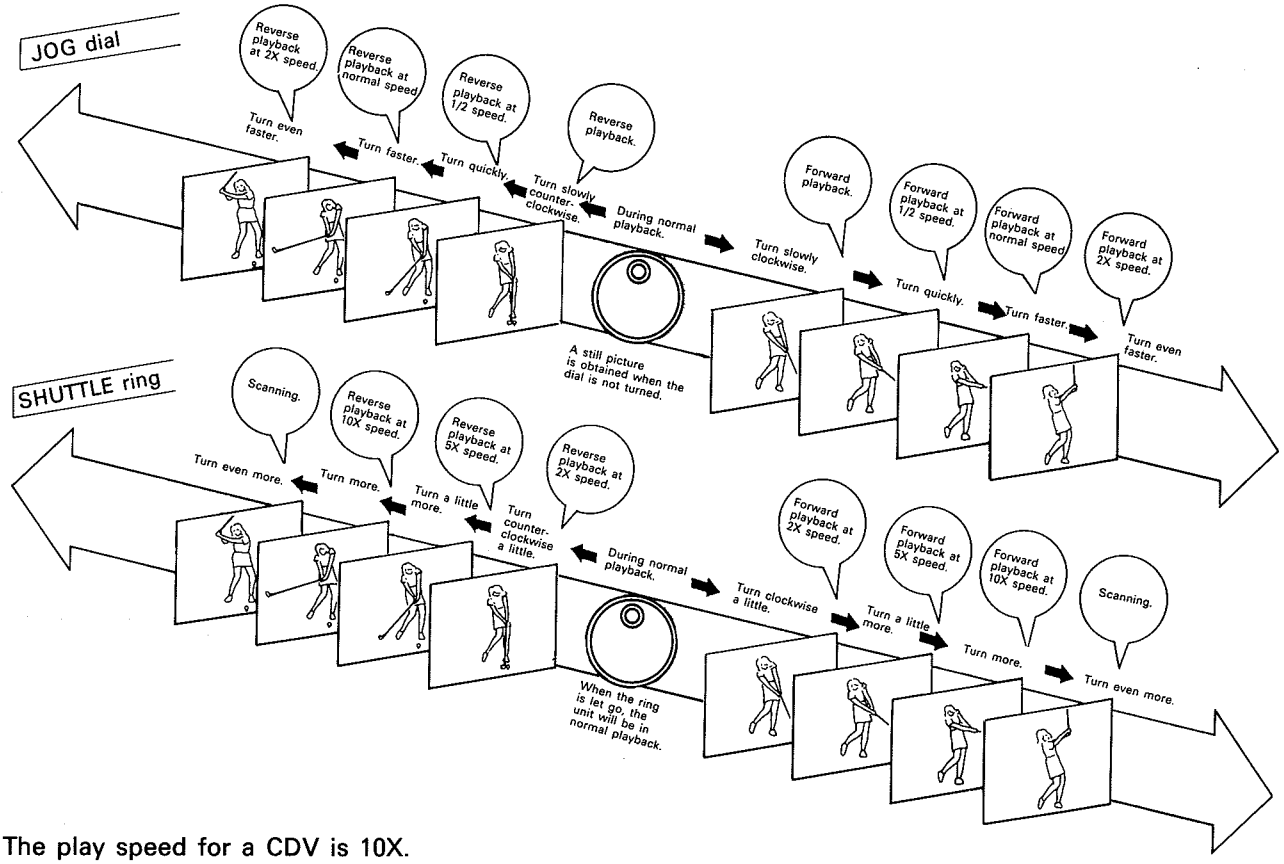
During normal playback 30 frames are shown per second.
When the power is turned on, a 4 frame interval is automatically selected.

CANCELLING STROBE MOTION

When the PLAY key is pressed, the player will enter normal playback mode.

SPECIAL PLAYBACK WITH THE JOG DIAL/SHUTTLE RING

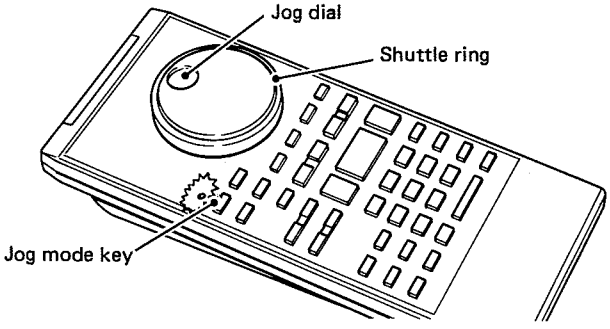
As with a professional VCR, the playback speed can be freely adjusted with the JOG dial and SHUTTLE ring.
For example, this feature can be used to study a pro golfer's swing or to watch the special effects of a science fiction movie more closely.
To do so, use the JOG dial. It can also be used to find the desired picture to store in memory via the One-shot Memory function.
When the JOG dial is used during normal playback, frame-by-frame playback according to the dial's turning speed, 1/2 speed playback, normal playback, and 2X playback can be done forward or reverse.
When the JOG dial is not turned, a still picture is obtained.
When the SHUTTLE ring is turned during normal playback, the forward or reverse playback speed can be adjusted to 2X, 5X, 10X, or to scanning speed.
When the ring is back to the normal position, the unit will return to normal playback.
The remote control unit can also be used for this purpose.



* The play speed for a CDV is 10X.

When doing special playback operations with the JOG dial or SHUTTLE ring, no sound will output even at normal speed.
To use the remote control unit's JOG dial, first turn on the JOG MODE key. After about 5 minutes of non-operation, the indicator will go off automatically. But to conserve battery power, turn off the JOG MODE key after using the JOG dial.
After using the SHUTTLE ring, the unit will return to the previous operation mode. However, a still picture might also be obtained.

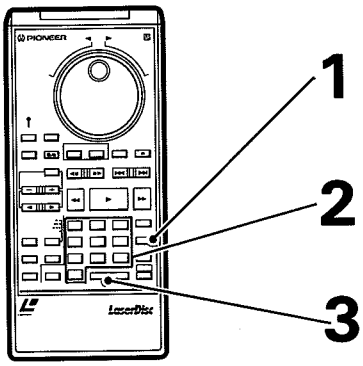
- A still picture is played after the JOG dial is operated. When the PLAY/STILL button or PLAY key is pressed, the player returns to normal play.



SEARCH (RANDOM ACCESS)

SEARCH (RANDOM ACCESS)

This function searches for the required scene using either frame numbers, chapter numbers, or time numbers. To search for a scene, use the remote control unit after a picture appears on the screen.
The same operation can be performed for the video portion of Compact Discs with Video. In addition, both forward and reverse search is possible for both the video and audio portions.



NOTE:

- *If you specify a chapter number, frame number or a time number which is larger than maximum recorded number, the player will search near the end of the side being played. When playing a disc with TOC, search for a chapter number greater than the one recorded on the disc cannot be done.*
- *If the PLAY key or MULTI-SPEED key is pressed during search operation (when the PLAY indicator is flashing during the time the player is searching for the specified scene), the player will play back in that mode (play or multi-speed) after search operation has been completed.*
- *Pressing the PAUSE key during a search pauses the disc at the point searched for.*

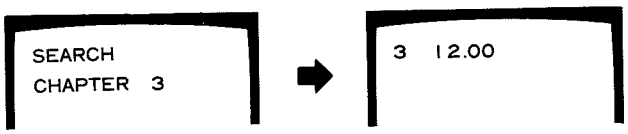
DIRECT SEARCH

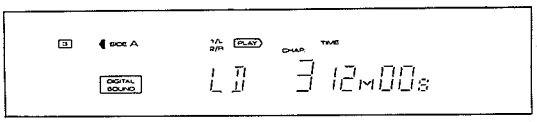
(For standard play and extended play discs on which chapter numbers have been recorded.)

Playback starts from the selected chapter and continues to the last chapter.

- Chapter 0 to 9 can be specified directly with the 0 to 9 buttons on the front of the player or 0 to 9 keys on the remote control unit.
- When specifying chapter 10 and above, press the +10 button, and then press one of the 0 to 9 buttons to specify the second digit. Each time the +10 button is pressed, the number will increase by 10.

[Example]
To search for the beginning of Chapter 3.
■ **Press 3**





- The player returns to normal playback after a search. However, when a search is performed from a still picture, the still picture remains displayed.
- Beginning play by a direct search
  If the disc is set in the disc table and a direct search or the chapter number search is performed, play starts from the beginning of the specified chapter. Once play has stopped and the disc stops turning, the play and restart operations can be performed by the direct search or the chapter number search.
  In these cases, after the search is completed the unit returns to the play (normal play) mode.

CHAPTER NUMBER SEARCH

(For standard play and extended play discs on which chapter numbers have been recorded.)

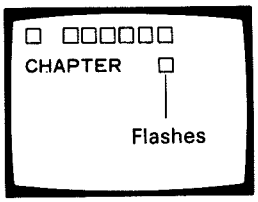
The player locates the head of the specified chapter and shows a still picture.

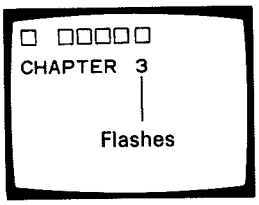
[Example]
To search for the beginning of Chapter 3

1. Press the CHAP./FRM•TIME key

If the frame or time is displayed, press the CHAP./FRM•TIME key again.

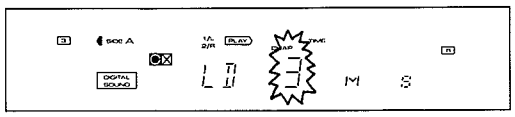
CHAPTER □ appears on the screen.
The number which appears is the number of the chapter which was previously searched for.



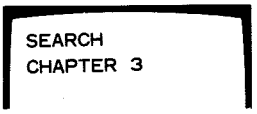


2. Press 3

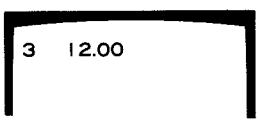
The indication CHAPTER 3 appears on the screen.



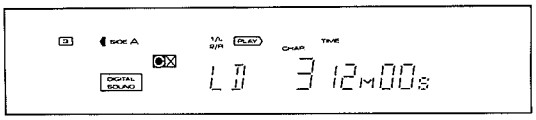
3. Press the SEARCH/MEMORY key



The beginning of Chapter 3 will be played as a still picture.



Frame number or time numbers to be searched for



TIME NUMBER SEARCH (Extended play discs only)

This function allows you to search for the scene corresponding to the elapsed playing time from the beginning of a program.

After search, a still picture will be displayed. When the PLAY key is pressed, the unit will enter normal playback.

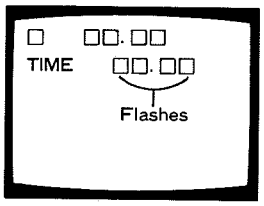
[Example]
To search for the picture 12 minutes from the beginning of a program.

For discs with "second" time numbers

1. Press the CHAP./FRM•TIME key

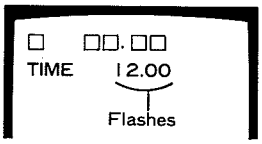
(TIME □□.□□ will be displayed)

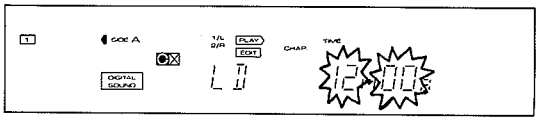
If the chapter is displayed, press the CHAP./FRM•TIME key again.



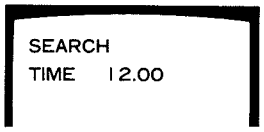
2. Press 1, 2, 0, 0

(TIME 12.00 will be displayed)

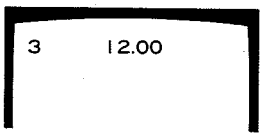




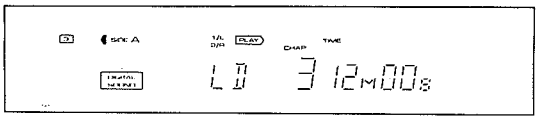
3. Press the SEARCH/MEMORY key



(Playback will start from the still picture that is 12 minutes from the beginning of the program.)



Chapter to be searched for (Example: 3)



NOTE:

Depending on the disc, time numbers may be recorded with either seconds as the minimum unit, or with minutes as the minimum unit.

With these different types of discs, searching may be performed to either second accuracy or minute accuracy respectively. As the two types of discs require slightly different methods of numeric entry, please be careful when entering numerals.

Cautions on entering the numeric value for the time number search

When specifying the search time with the DIGIT button, discs which have recorded the [SECONDS] and discs which have not recorded the [SECONDS] can have different input times even with the same button operation.

FRAME NUMBER SEARCH (Standard play discs only)

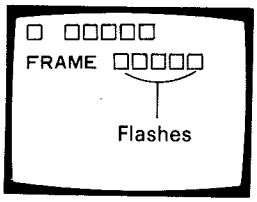
This function allows you to search for the specified frame number, and plays it back as a still picture.

[Example]
To search for frame number 12340

1. Press the CHAP./FRM•TIME key

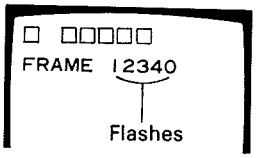
If the chapter is displayed, press the CHAP./FRM•TIME key again.

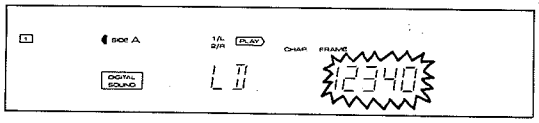
FRAME □ □ □ □ □ appears on the screen.
The number which appears is the frame number which was previously searched for.



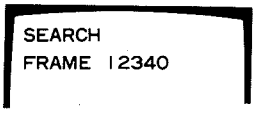
2. Press 1, 2, 3, 4, 0

The indication FRAME 12340 appears on the screen.

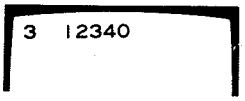


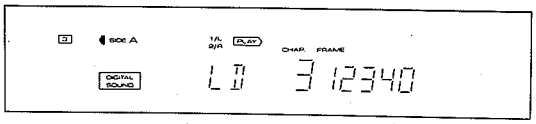


3. Press the SEARCH/MEMORY key



The image of frame 12340 appears as a still picture.





For the video portions of Compact Discs with Video, a function corresponding to a time number search (for discs which are recorded in seconds) and a track number search (which corresponds to a chapter number search) is possible. With a track number search, TRACK is displayed instead of CHAPTER.

ABBREVIATION OF SEARCH PROCEDURE

The numerals entered during the search operation are not modified until either disc playback stops, or until a new numeric entry is made.
If you want to search for the same picture indicated by the numeric display which appears when the CHAP./FRM•TIME key is pressed, you can search for the picture by simply pressing the SEARCH/MEMORY key.

Beginning play with a chapter search (direct chapter start)

Setting a disc on the disc table, then starting a chapter search, begins play from the specified chapter. It is also possible to resume play with a chapter search after play has been stopped.
In this case, the player begins to play once it finds the specified chapter. (Normally, after a chapter or time is found on a disc, that spot is shown as a still frame.)

Correcting the input number (Direct search)

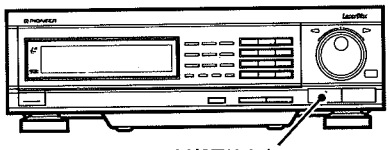
If the wrong number key was pressed, press the CLEAR key then enter the correct number.

Ending a search

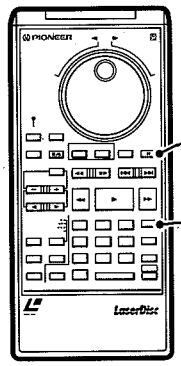
Pressing the CLEAR key during SEARCH/MEMORY key input, sets the search number to 0. Pressing the CLEAR key again at this point cancels the search number entry. Also, pressing the CLEAR key during search mode will cancel the search and start video playback from the point the CLEAR key was pressed.

CD • CDV

COMPACT DISC PLAYBACK FUNCTIONS



PLAY/STILL button



PAUSE key

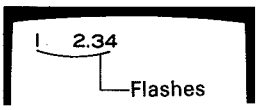
DISPLAY key
(Switches between display of the current track and time, the remaining time, and the total number of tracks and total playing time)

Audio

When a Compact Disc is played, the AUDIO 1/L and 2/R indicators and the DIGITAL SOUND indicator on the front of the player light up and the audio is output from the audio output terminals on the rear of the player.

PAUSE

Press the player's PLAY/STILL (►/►◄) button or the remote control unit's PAUSE key during playback.
The player's PLAY indicator on the front panel will go off. The track number, minutes and seconds will flash.

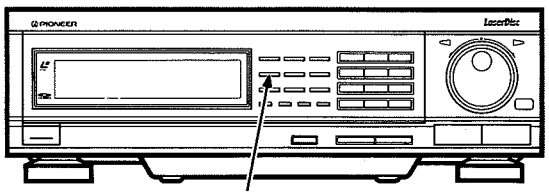


Pressing the key again causes playback to resume from the point of interruption.

NOTE:

- *When the screen display is turned off, the indication PAUSE appears on the screen if the player enters the PAUSE mode.*

RANDOM PLAYBACK

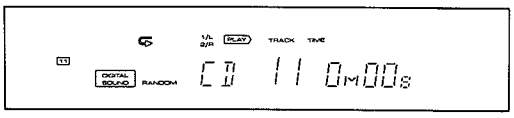


RANDOM PLAY

- This is for playback of Compact Discs and Compact Discs with Video.
- The tracks of the inserted disc will be played at random. After all the tracks are played, random playback will be repeated.

- If the RANDOM PLAY button is pressed while the program is being entered or performed, the player will choose and play a selection at random from the selections which are already programmed. When the programmed selections are finished, operation starts again from the beginning.

1. During playback mode, press the RANDOM PLAY button.
The "RANDOM" and "REPEAT" indicators will light, and random playback will start.



2. During random playback, press the RANDOM PLAY button again. Another track selected at random will be played.

■ Cancelling random playback

- The random play mode can be cancelled by pressing the CLEAR key or by selecting a specific track.

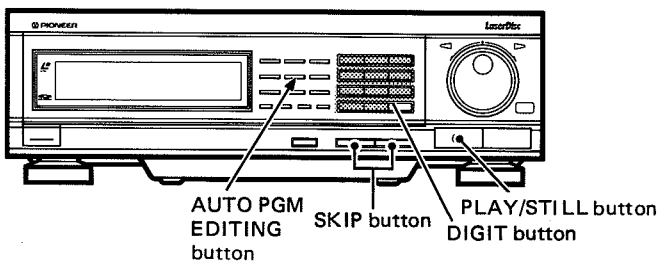
TRACK NUMBER AND TIME DISPLAY

The number of the track being played and the time elapsed from the start of that track are displayed on the indicator display on the front of the player and the TV screen.
Each time the DISPLAY key on the remote control unit is pressed, the display changes. 'REMAIN' indicates the time remaining until the end of the disc; 'TOTAL' indicates the total number of tracks recorded on the disc and the total playing time of the disc; 'TIME' indicates the track no. being played and playback time. These indications are given alternately.

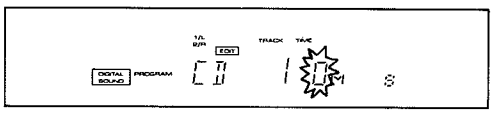
AUTO PROGRAM EDITING
(Programming tracks which can be played back within a desired time)

Once the desired playing time is selected, the selections desired are programmed into the player automatically in the selected order within the designated time, starting from the 1st track.

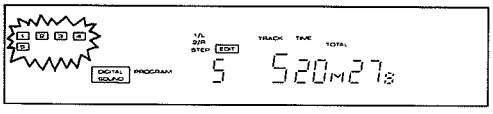
[Example] Programming in order from the 1st track



1. Press the AUTO PGM EDITING button during play or in the stop mode.
When you press the button during play, operation will switch to the PAUSE mode.



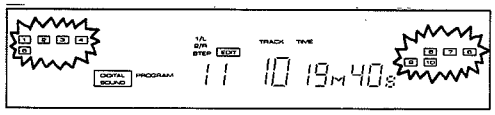
2. Set the playing time in minutes with the DIGIT buttons.
The selections which can be played within the preset time will begin playing automatically in order from track 1.



[For subsequent program]

3. Press the AUTO PGM EDITING button.
PAUSE is programmed automatically.

4. Set the playing time in minutes with the DIGIT buttons.
Program the selections to playback during the desired time, starting with the selection which follows the last selection programmed in steps 1 and 2 above.
The last selection no. programmed and the playing time will be displayed.



Visual calendar display

The visual calendar on the left side shows the selections which have been programmed previously and which can be performed.
The visual calendar on the right side shows the selections which can be played from the continuing program.

NOTE:

- *When programming for more than 9 minutes, press the DIGIT buttons within two seconds of each other. If more than two seconds elapses between pressing the buttons, the designated time will be interpreted as less than 10 minutes.*

- *When programming with discs which have more than 20 selections on them, there will be occasions when the desired programming cannot be set.*
- *Programming cannot be performed when at least 1 selection cannot be programmed within the designated playing time.*

[Example] Programming from a desired selection

After performing the operation described above in item 1, specify the selection numbers with the SKIP button ⏮, ⏭, then perform the operations in items 2 to 4.

Cancelling the automatic program editing mode

Before specifying the time, press the AUTO PGM EDITING button.
After the time is specified press the CLEAR button.

[Procedure]

When auto program editing has been selected for the first playing session

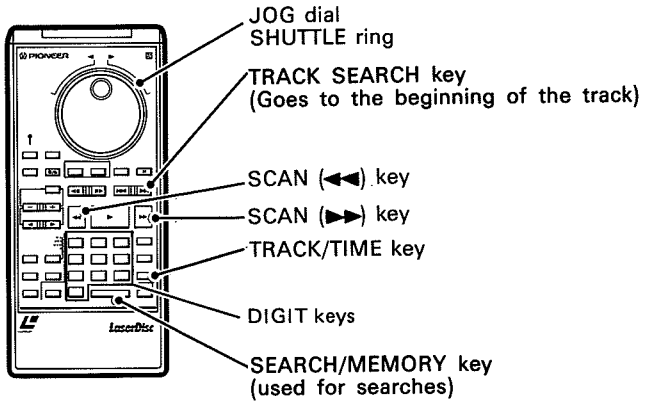
■ **Press the PLAY/STILL button.**
Operation can be performed in this instance. It can also be performed by pressing the PLAY key of the remote control unit. The player will stop after the programmed selections are played.

When auto program editing has been selected for the first two playing sessions

1. **Press the PLAY/STILL button.**
Operation can be performed in this instance. It can also be performed by pressing the PLAY key of the remote control unit. The player will pause after the first programmed session is played.
2. **Press the PLAY/STILL button again.**
Operation can be performed in this instance. It can also be performed by pressing the PLAY or PAUSE key of the remote control unit. Playing will start with the selections programmed in the second programming session.

Stopping Play and Clearing Programs

Press the STOP/OPEN button or CLEAR button.



INTRO SCAN

If the INTRO SCAN button is pressed, approximately 8-second sections of the beginning of each track are played successively and then the desired track is played. When the desired track is reached, press the PLAY/STILL button on the front of the player or the PLAY key on the remote control unit.
After all the tracks are scanned and if no desired track is selected the unit returns to normal play from the beginning of the disc.

NOTE:
The Intro Scan starts with the video portion of Compact Disc with Video and then scans the audio portion. After all the tracks are scanned, normal play starts from the first track of the video portion.

DIRECT SEARCH (Playback from the desired track)

Playback starts from the selected track and continues to the last track.

- Tracks 1 to 9 can be specified directly with the 1 to 9 DIGIT buttons on the front of the player or 1 to 9 DIGIT keys on the remote control unit.
- When specifying track 10 and beyond, press the +10 button and then press one of the 0 to 9 buttons to specify the second digit. Each time the +10 button is pressed, the number will increase by a factor of 10.

[Example]
To search for the beginning of track 3
■ **Press 3**

To search for the beginning of track 26
■ **Press +10, +10 and 6**

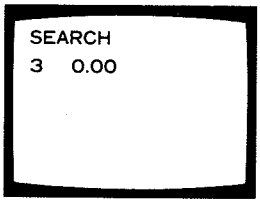
TRACK SEARCH (Skip selection)

This operation can be carried out with either the TRACK SEARCH key on the remote control unit or with the SKIP buttons on the player.

⏭ side: Search for the start of the next track
⏮ side: Search for the start of the track currently being played

If the key is repeatedly pressed, the player skips to the beginning of tracks in accordance with the number of times the key is pressed.

(The beginning of the third track)



NOTE:

- *If the TRACK SEARCH key is pressed during the pause mode, the player returns to pause mode after the jump.*
- *Be careful when you press the key to jump in the reverse direction. The first time you press the key, the player jumps to the beginning of the track currently playing. The second time you press the key, the player jumps to the beginning of the previous track.*
- *If the forward track search key is pressed during playback of the last track on the disc, or if the player is in pause mode over the last track on the disc, the player does not accept the command from the key. The player also does not accept commands for track searches beyond the last track.*
- *The track number can also be specified with the DIGIT keys. See the section on "DIRECT SEARCH".*

SCAN (FAST FORWARD, FAST REVERSE)

Operate during playback.

Do the operations with the remote control unit's SCAN keys, the JOG dial, and SHUTTLE ring. The player's JOG dial and SHUTTLE ring can also be used. (See page 32.)

►►: Fast forward ◄◄: Fast reverse

When scan operation is performed in the play mode, the playback sound can be heard faintly. However, no sound can be heard when the video portions of Compact Discs with video are scanned.

When the scan operation is performed in the pause mode, the scan operation is performed without sound, and when the key is released, the player returns to the pause mode. The speed at which the scan operation is performed, is increased in two stages. During the first two seconds following the pressing of the key, low speed scan operation is carried out. Following this, high speed scan operation is carried out.

TRACK NUMBER SEARCH

This function allows you to search for the start of the specified track number, and plays it back.

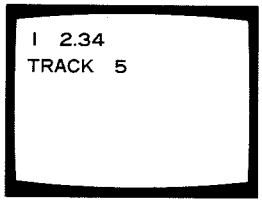
[Example] To search for Track 5 (video portion)

1. Press the TRK/TIME key

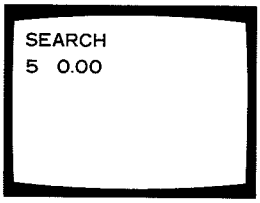
- Output the track display on the screen. When the TIME display appears press this key again.

2. Press 5

TRACK 5 appears on the screen.



3. Press the SEARCH/MEMORY key.



When the track is specified by pressing the TRK/TIME key like this, specify the desired track by the numbers 0 to 9.

TIME SEARCH

The desired location in the tracks currently being played can be specified in minutes and seconds.

[Example]

To play after 1 minute and 23 seconds has elapsed from the beginning of the video portion

1. Press the TRK/TIME key.

- Output the TIME display on the screen. When the TRACK display appears press this button again.

2. Press 1, 2, 3.

3. Press the SEARCH/MEMORY key.

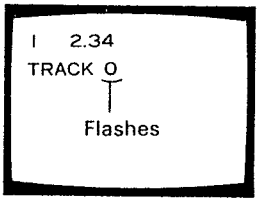
TIME NUMBER SEARCH

This function allows you to search for the point corresponding to a specified time in minutes and seconds, from the start of a specified track.

[Example] To search for the point 1 minute and 23 seconds from the beginning of Track 3

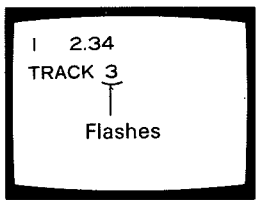
1. Press the TRK/TIME key

- Display the time from a certain track on the screen.

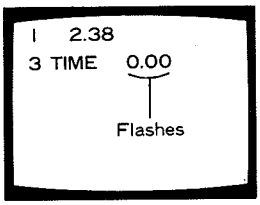


2. Press 3

- If the SEARCH/MEMORY key is pressed after this operation, play starts from the beginning of the third selection.
  TRACK 3 appears on the screen.



3. Press the TRK/TIME key

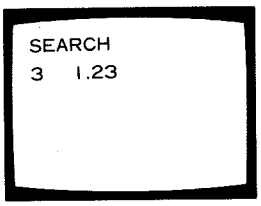


4. Press 2, 3, 4

- Specifies 1 minute and 23 seconds into the 3rd track.

5. Press the SEARCH/MEMORY key

The player searches for the point 1 minute and 23 seconds from the start of Track 3, and then begins playback.



If the DISPLAY key on the remote control unit is not pressed before a track search or time search is started, the on-screen display will go out following the search.

When the TRK/TIME key is pressed without prior entry of the track the track number, being played back is selected.

If the specified search time is longer than the length of the track and the table of contents (TOC) can be correctly read, the player will not accept the search command.
If the disc is scratched so that the TOC cannot be read, the player searches for the start of the next track.

Correcting the input number

If the wrong number key was pressed, press the CLEAR key then enter the correct number.

Ending a search

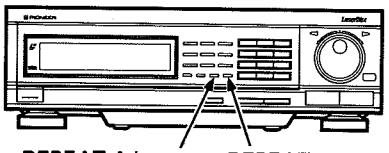
Pressing the CLEAR key during search key input will set the search number to 0. Pressing the CLEAR key again at this point cancels the search number entry. Pressing the CLEAR key while the player is actually searching for a chapter or time ends the search and the player plays from disc wherever it was when the search was ended.

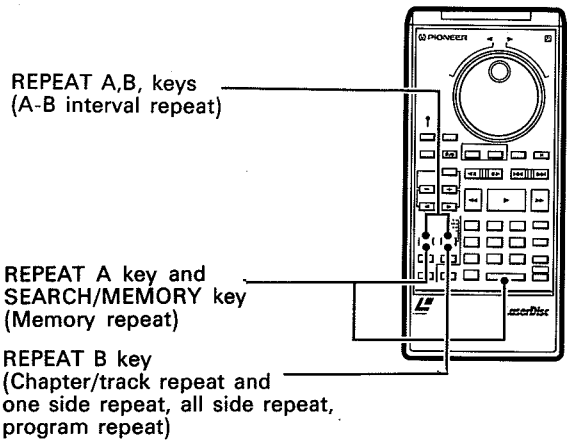
Beginning play with a track search (Direct track start)

Setting a disc on the disc table then entering a track search starts the disc playing from the specified track.

REPEAT PLAYBACK

This function allows playback of part or all of a disc.



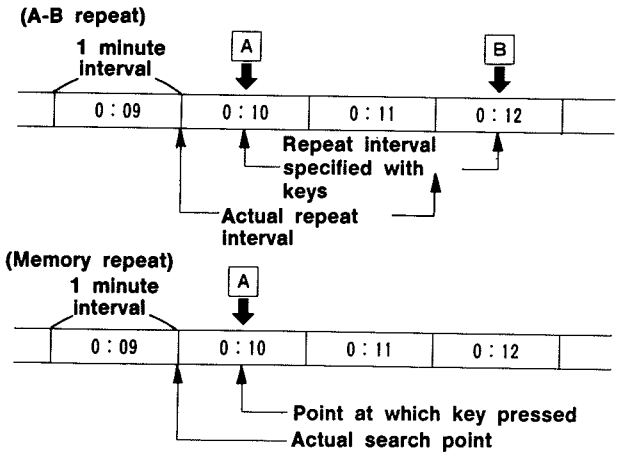


FOR LASERVISION DISCS:

REPEAT INTERVALS FOR EXTENDED PLAY DISCS

In the case of extended play discs, repeat playback is carried out using time numbers recorded on the disc. On some discs, time numbers are recorded with seconds as the minimum units, while on other discs, time numbers are recorded with minutes as the minimum units.

When A-B repeat or memory repeat are carried out with extended play discs on which time numbers are recorded with seconds as the minimum units, the point (scene) at which the key is pressed, and the actual repeat interval or search point (scene), corresponds almost exactly, but in the case of discs on which time numbers are recorded with minutes as the minimum units, these points do not always correspond.



NOTE:
In the case of discs on which time numbers are recorded in minute units, the minimum A-B repeat interval is one minute. Also if the [A] and [B] repeat keys are pressed within the same "minute", A-B repeat is not performed.

REPEAT PLAYBACK BETWEEN TWO POINTS (A-B)

This function repeatedly plays back an interval between specified frames (standard play disc) or between specified times (extended play discs).

[Procedure]

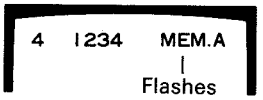
1. **At the beginning point of the interval you wish to repeat, press the REPEAT (A) key.**
2. **At the end point of the interval you wish to repeat, press the REPEAT (B) key.**

The A-B REPEAT indicator on the front panel of the player will light, and the interval between A and B will be repeatedly played back.

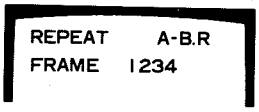
[Display]

(LaserVision Disc: Standard play disc)

(When the A key is pressed.)

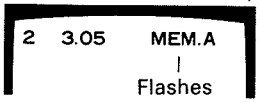


(When the B key is pressed.)

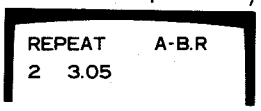


(Compact Disc or Audio portion of Compact Disc with Video)

(When the A key is pressed.)



(When the B key is pressed.)



NOTE:

- *If you press the (A) key and then return to an earlier point in the program and press the (B) key (B<A), the player will repeat the interval between B and A, using B as the starting point and A as the ending point.*
- *When the chapter and frame or time is being displayed for a LaserVision Disc, pressing the A key makes the "MEM. A" display blink. Pressing the B key displays "A-B.R" continuously.*
- *Repeat play of a Compact Disc with Video cannot be performed for A and B points which extend over both audio and video portions.*

MEMORY REPEAT

This function allows you to specify a scene which you want to see again, so that you can return to the scene again at any time.

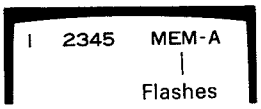
[Procedure]

1. **Press the REPEAT (A) key at the scene you wish to memorize.**
2. **Continue playback, and when you want to return to the scene specified in 1 press the SEARCH/MEMORY key.**

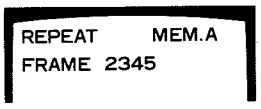
[Display]

(LaserVision Disc: Standard play disc)

(When the A key is pressed.)

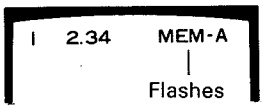


(When the SEARCH/ MEMORY key is pressed.)

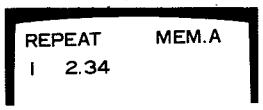


(Compact Disc or Audio portion of Compact Disc with Video)

(When the A key is pressed.)



(When the SEARCH/ MEMORY key is pressed.)



NOTE:
With a Compact Discs with Video, memory repeat from the audio to the video portions and visa versa cannot be performed.

CHAPTER/TRACK REPEAT

For a LaserVision Disc, the same chapter is played over and over; for a Compact Disc and Compact Disc with Video, the same track is played over and over.

[Procedure]

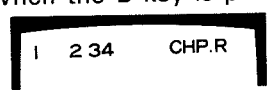
Play the chapter (or track) which you want to be repeatedly played and press REPEAT (B).

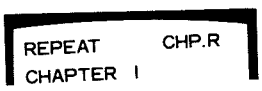
After playing to the end of the chapter (or track), the player will search for the start of the chapter (or track), and play it again.

[Display]

(LaserVision Disc: Standard play disc)

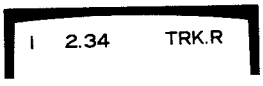
(When the B key is pressed.)

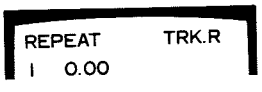




(Compact Discs or Audio portion of Compact Disc with Video)

(When the B key is pressed.)





NOTE:
With a LaserVision Disc without a chapter number, CHAPTER REPEAT cannot be performed. If the REPEAT (B) key is pressed during playback of such a disc, ONE SIDE REPEAT, described later, will be performed.

ONE SIDE REPEAT

One side of a disc is played back repeatedly. For Compact Discs with Video, playback is repeated for both the audio and video portions.

[Procedure]

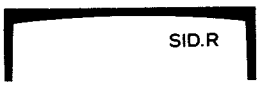
Press REPEAT (B) in chapter/track repeat mode.

Accordingly, if you are playing back a disc on which chapter (or track) numbers are recorded, and are not already in chapter/track repeat mode, you should press REPEAT (B) twice in succession.
After playing back to the end of one side of the disc, the player searches for the start of the disc, and plays the disc again.

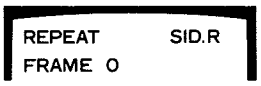
[Display]

(LaserVision Disc: Standard play disc)

(When the B key is pressed to set the player for the side repeat mode.)

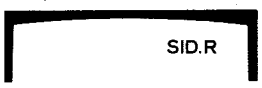


(Search the beginning of the disc)

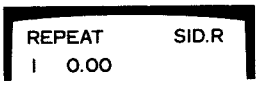


(Compact Disc)

(When the B key is pressed to set the player for the side repeat mode.)



(Search the beginning of the disc)



NOTE:

- *When the CHAPTER/FRAME·TIME display is made with LaserVision Disc, the CHP.R and SID.R indicators also light continuously.*

ALL SIDE REPEAT

Both sides of a LaserVision Disc are played back repeatedly.

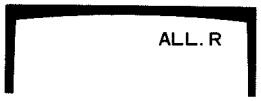
[Procedure]
Press REPEAT (B) in one side repeat mode.

Accordingly, if you are not already in the one side repeat mode, you should press REPEAT (B) three times in succession.

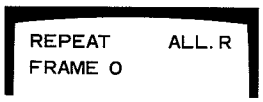
After side A is played, side B is played. When side B is finished, side A is played again from the beginning.

[Display]

(LaserVision Disc: Standard play disc)
(When the B key is pressed to set the player for the all side repeat mode.)



(Search the beginning of the disc)



NOTE:

- *For Compact Discs and Compact Discs with Video, only normal playback is possible.*
- *Normal play is performed for a LaserVision Disc with recorded chapter numbers.*
- *Do not set the ALL SIDE REPEAT mode during playback of a single-side LaserVision Disc. If the ALL SIDE REPEAT button is pressed, after the side A playback is finished, the player attempts to perform the side B playback and then stops.*

PROGRAM REPEAT

Pressing the REPEAT (B) key while the player is playing a chapter program puts the player in program repeat mode. Pressing the PLAY key starts repeat playback of the chapter program.
For more details, see Page 46 "Program Repeat Playback".

TO CANCEL THE REPEAT MODE

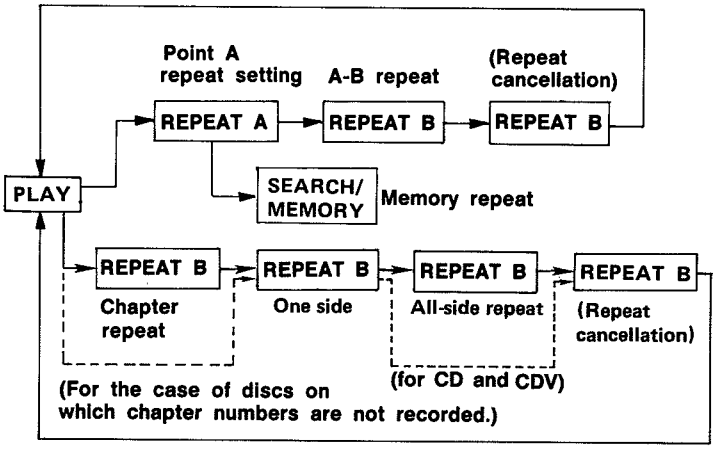
To cancel the repeat mode, press the CLEAR key.

- **During A-B repeat...**
  After playing up to point B, the player advances to the next frame number or time number without returning to point A.
- **During chapter/track repeat...**
  After playing to the end of the chapter (or track) currently being repeated, the player advances to the next chapter (or track).
- **During one side repeat...**
  After playing to the end of the disc, playback ends, and the disc stops rotating.
  When a Compact Disc with Video plays to the end of the video portion, play continues through the audio portion also.
  After the audio portion has played to the end, playback is completed.
- **During all side repeat...**
  After playing to the end of the LaserVision Disc, playback ends, and the disc stops rotating.
- **During a program repeat...**
  The last chapter or track in the program is played, then the play stops.

SELECTION OF REPEAT MODE WITH THE REPEAT KEY

The repeat mode selections which can be made using the REPEAT (B) key, are shown in the figure below. Please make use of this for specifying and changing the repeat mode.

[Repeat mode selections using the REPEAT (B) key]



SWITCHING THE PLAYBACK MODE DURING REPEAT PLAY

Even during repeat play, remote control operations such as changes in the playback mode or searches are accepted. Some of these operations end the repeat play and some do not.

	LaserVision Disc, Video portions of CDV	Compact Disc, Audio portion of CDV
Do not cancel repeat play	● Play ● Pause ● Still/Step (forward or reverse) ● Multi-speed forward (►) ● Fast forward, fast reverse	● Play ● Pause ● Fast forward, fast reverse
Cancel repeat play	● Chapter skip (forward or reverse) ● Search operations (chapter/frame, time, digit entry) ● Program play ● Multi-speed reverse (◄) One side repeat and all side repeat are not canceled.	● Track search ● Search operations (digit, track or time) ● Program play

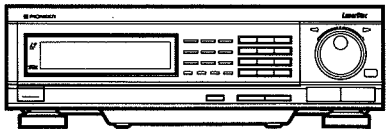
PROGRAM PLAYBACK

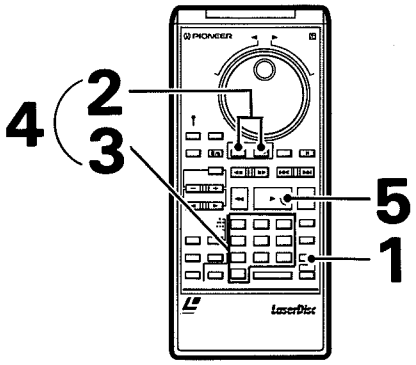
CHAPTER PROGRAM PLAY **[LASERVISION DISC]**
(Only discs on which chapter numbers are recorded)

TRACK PROGRAM PLAY **[COMPACT DISC or COMPACT DISC WITH VIDEO]**

This function lets you play back chapters on LaserVision Discs or tracks on Compact Discs or Compact Discs with Video, in any order you like. You can program the order you want using the remote control unit.
Chapter programming is not possible for LaserVision Discs in which chapter numbers are not recorded.

NOTE:
- *Programming is possible during play, pause and repeat modes, but programming during repeat mode causes repeat mode to be cancelled.*
- *In the case of LaserVision Discs, programming can be done during still frame, and multi-speed playback also.*





[Program Playback Procedure]
A maximum of 20 steps can be programmed.
The programmed chapter or track numbers are displayed on the screen in order.
Attempts to program more than 20 items are not accepted.

Procedure	
STEP 1.....	**Press the PGM key.**
STEP 2.....	**Press the SIDE key to specify the disc side.**
STEP 3.....	**Enter a chapter or track number using DIGIT keys 0 - 9 and + 10.**
STEP 4.....	**If required repeat steps 2 and 3.**
STEP 5.....	**Press the PLAY key.**

- Playback is in the programmed order.
- When all the programmed steps have been played, the player sets to the stop mode and the programs are cleared. The player then sets to the condition shown in step 1.

NOTE:
- *Caution for Input*
  When the numbers 0 to 9 are specified, they are input directly by the 0 to 9 number buttons and then the next step is input.
  When specifying numeric values of 10 and above, press the +10 button and then press one of the 0 to 9 buttons to specify the second digit. Each time the +10 button is pressed, the number will increase by 10.
- *TIME/REMAIN/TOTAL display for a program*
  Compact Discs and audio portions of Compact Disc with Video: The remaining time of the programmed selection (REMAIN) or the total playing time (TOTAL) is displayed.
  LaserVision Discs with input TOC and Compact Disc and video portions of Compact Disc with Video: The total play time of the disc (TOTAL) is displayed.

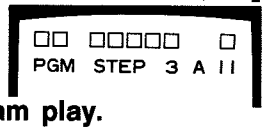
[Example] Program side A chapter 3, side B chapter 6 and side A chapter 11 while side A of LaserVision Disc is playing.
For Compact Discs, Compact discs with Video and single-side LaserVision Discs, the disc side is not specified but the program methods are the same.

1. Press the PGM (PROGRAM) key

2. Press SIDE A, 3

3. Press SIDE B, 6

4. Press SIDE A, +10, 1



5. PLAY .... Start of program play.

NOTE:
If chapter or track numbers not on the disc are entered.
- *LaserVision Discs without a table of contents :*
  Chapter numbers not on the disc are programmed, but are skipped during program playback.
- *Compact Discs, Compact Discs with Video and LaserVision Discs with table of contents :*
  If the table of contents has been read after playback starts, track numbers (chapter numbers) which are not on the disc cannot be programmed. However, with LaserVision Discs featuring a table of contents, chapter no. '0' is programmed even when it is not on the disc.
  If programming was performed before playback, entry of track numbers not on the disc will be accepted, but when playback starts, the selection numbers will eliminated from the program when the table of contents is read.

PAUSE PROGRAM

In place of a chapter or track number, it is possible to program a pause. When this is done, a "P" is displayed on the TV screen.
When recording on both sides of a cassette tape, programming for a pause to occur after the completion of the last track, before the first side of the tape runs out, will enable recording of the next track to begin, after the tape has been turned over.

[Example]

Program Compact Disc playback so that the player plays Track 3, pause, and Track 5.
Press PROGRAM, 3, PAUSE, 5, and PLAY.
The player will then play Track 3, and search for and pause at the beginning of Track 5. When the PLAY key is pressed, playback of Track 5 will begin.

If a pause is programmed during the last step, the player will play back the chapter or track specified for the previous step, and then pause at the beginning of the next track or chapter.

The first step and the next pause cannot be programmed. The pause program is counted as one step.

CORRECTION OF NUMERIC ENTRIES

To correct all the numbers that have been entered, press the PGM (PROGRAM) key and then re-enter the numbers.

PROGRAM CORRECT

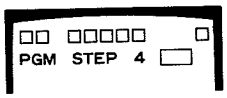
[Changing data during program input]

The data input during programming can be corrected using the SKIP buttons [►►I , I◄◄] or PGM CORRECT key [►►I , I◄◄].

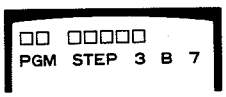
[Example]

After inputting side A chapter 3, side B chapter 5 and side B chapter 7 on a LaserVision Disc, the contents of the second step (side B chapter 5) are changed to side A chapter 12.

When the display indicates :



Press the I◄◄ key.



Press the I◄◄ key again.

Press SIDE A, +10, 2

After approximately one second

The second programmed step number is changed to "side A chapter 12" by using the procedure described above.
If you press the PLAY key at this point, the programs will be played in the order of side A chapter 3, side A chapter 12 and side B chapter 7.
If you press the ►►I key in the same manner during program input, each time you press the key, the number for the step being correct will increase by one each time you press the key.

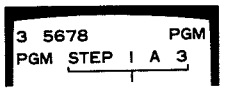
[Changing the programming during program playing]

After pressing the PGM (PROGRAM) key during program playing, press the PGM CORRECT keys [I◄◄ , ►►I]. These serve as the PGM CORRECT keys to change or add selections to the existing program.

[Example]

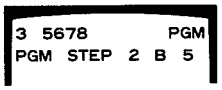
The program order for a LaserVision Disc is side A chapter 3, side B chapter 5 and side B chapter 7. While side A chapter 3 program is playing, side B chapter 7, in step 3, is changed to side A chapter 1 and step 4 side B chapter 25 is added.

Press the PGM (PROGRAM) key.

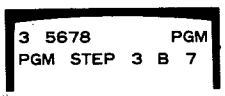


With the step presently being input, the indicator will flash to indicate that the data for that step cannot be changed.
In this example, it indicates that the "3" which is the selection input in step 1 is being played.

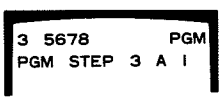
Press the ►►I key



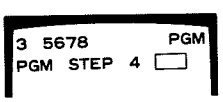
Press the ►►I key once again



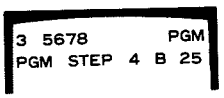
Press SIDE A, 1



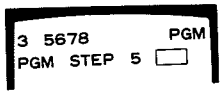
Approximately 1 second later



Press SIDE B, +10, +10, 5



Approximately 1 second later



After the desired corrections are made, press the PROGRAM key to register the corrections.

Cautions for changing programs during program playback

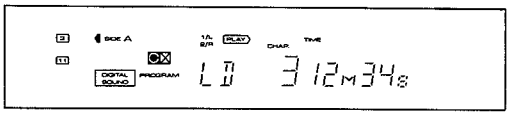
A display which flashes at the same time as the currently executed step indicates that the contents of the step cannot be changed.
The example above indicates that [A3] of the contents of STEP 1 is the present play selection.

Compact Discs, Compact Discs with Video and single-side LaserVision Discs

The program method is the same except that the disc side is not displayed. The screen display does not display side A or side B.

PROGRAM DISPLAY

This is an example of the display if side A chapter 3, side B chapter 6 and side A chapter 11 are programmed.



[During programming]

The input of either the chapter number or the track number by the DIGIT buttons will be displayed on the screen. The input numbers will light on the display section.

[During program play]

By pressing the DISPLAY key, the present chapter - frame / time and the disc side and chapter of the next 4 steps are displayed.
The present disc side is not displayed.
During the track program play of a Compact Disc, the program is displayed at the same time as the selection number and the time.

- The number indications on the display goes out when the corresponding program is finished.

NOTE:

Display of playback information during track program play

During program play of Compact Discs, the REMAIN and TOTAL displays show the time remaining for the program or the total number of tracks and the total playing time for the program.

- If a pause is programmed, the pause is not included in the TOTAL track number display.
- If the REMAIN or TOTAL time exceeds 99 minutes and 59 seconds, the minutes are displayed in 3 digits on the TV screen.
- In case of discs with more than 19 tracks, only the present time and track number are displayed (the time remaining on the program, the total number of tracks and the total playing time are not displayed).
- LaserVision Discs and the video portion of Compact Discs with Video do not display the remaining time. The TOTAL display indicates only the total number of tracks and total playing time of the disc. LaserVision Discs which do not have a TOC will not be displayed.

NOTE:

If more than 19 tracks are recorded on the disc, this display will not be appear.

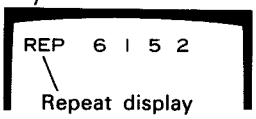
PROGRAM REPEAT PLAYBACK

After the player enters the program mode, a chapter or track can be programmed. When the programming is completed, press the REPEAT B key to set the program repeat mode. If the PLAY/STILL button or PLAY key is pressed, program repeat playback starts.

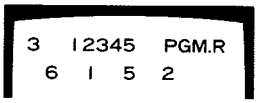
To cancel repeat playback, press either the CLEAR key or the REPEAT B key.

Example: (for LaserVision Discs)

Press the REPEAT (B) key during programmed playback.



When setting to programmed playback with the PLAY key, the program will be repeated.



SKIPPING OF PROGRAM STEPS

If the CHAPTER SKIP/TRACK SEARCH key is pressed during program playback, a program step can be skipped.
If the key is repeatedly pressed, steps will be skipped accordingly.
If a pause is programmed, the skip operation will ignore the pause, and will skip to the following (or preceding) step.

CANCELLATION OF PROGRAM PLAYBACK

When all of the programmed chapters or tracks have been played back, the disc stops rotating, and the program is cleared.
To cancel playback part way through program playback, press the CLEAR key. (This will also cause the program to be cleared.)

NOTE:

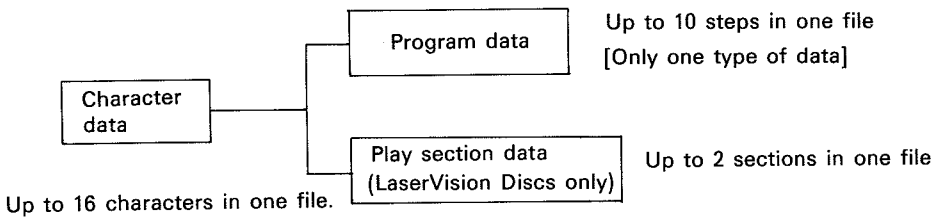
- *If search, or repeat operations are performed during program playback, the program playback will be cancelled.*
- *During playback of a LaserVision Disc, program playback will be cancelled if multi-speed operation in the reverse direction (◀) is carried out.*
- *Programming can be performed during play, stop, pause or repeat playback. However, when programming is performed in the repeat playback mode, the repeat mode will be cancelled.*
- *If chapter number which is not on the disc is programmed, the number will be skipped during program playback.*

MAKING A FILE

WHAT IS A FILE?

A file stores the program for a message or selection you wish to play (chapter) or a number attached to a particular section you wish to play. If the file number is specified, the input message is displayed on the television screen. An input program or a playback section can be played.

FILE TYPES AND COMBINATIONS



CHARACTER DATA INPUT

When play is stopped

- After setting the disc, press the play key. When the disc is played, press the EJECT key to stop the player.

1. Press the FILE key.

- The player enters the file input mode.

2. Press the SEARCH/MEMORY key.

- The input file number is input automatically. Characters can be input first.

3. Select the characters on the JOG dial.

- A file can consist of messages and the disc title.
- The flashing characters on the second line can be input to the flashing location on the third line.
- If the characters after Q are shuttled to the right, the characters on the second line flow to the left.
- The following characters and numbers can be input.

  A, B, C, ---- X, Y, Z, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, □, ■, [,], <, >, ↗, ↖, +, −, *, /, =, ?, #, —, ', „, ., :

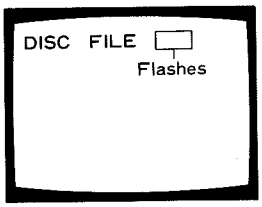
4. Press the SEARCH/MEMORY key.

- The input is completed for one character (or symbol or number).

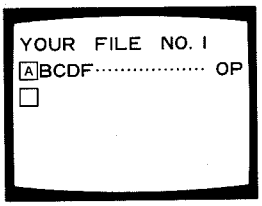
5. Repeat steps 3 and 4 to input the message.

[Example]
Input BEST MOVIES.

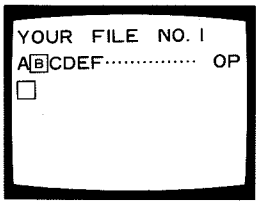
1. Press the FILE key.



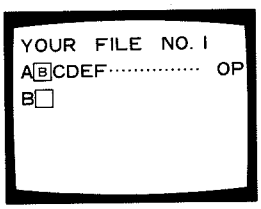
2. Press the SEARCH/MEMORY key.



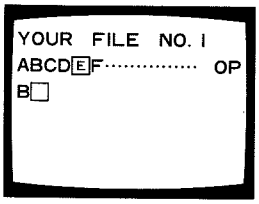
3. Operate the JOG dial and align the "B" with the flashing second digit.



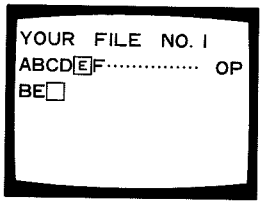
4. Press the SEARCH/MEMORY key.



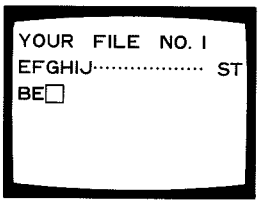
5. Operate the JOG dial and align the "E" with the flashing second digit.



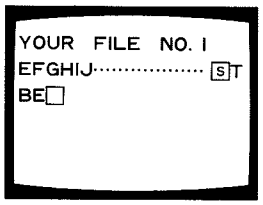
6. Press the SEARCH/MEMORY key.



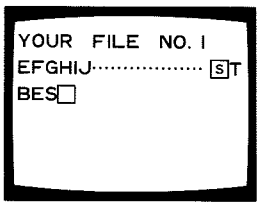
7. Operate the SHUTTLE ring and move the second position to the left.



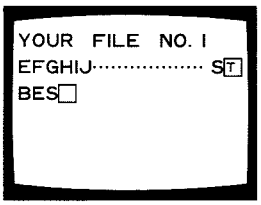
8. Operate the JOG dial and align the "S" with the flashing second digit.



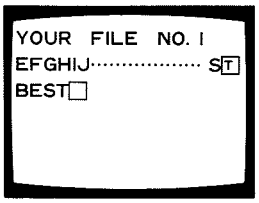
9. Press the SEARCH/MEMORY key.



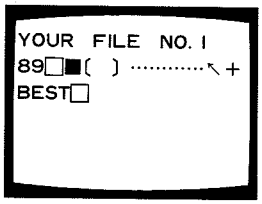
10. Operate the JOG dial and align the "T" with the flashing second digit.



11. Press the SEARCH/MEMORY key.

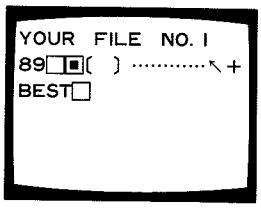


12. Operate the SHUTTLE ring and move it to the left to select the symbol.



13. Operate the JOG dial and align the ■.

- ■ is a space. □ is a space that is displayed on the screen.



(Repeat the steps above and complete the character input.)

NOTE:

- *When the power cord is inserted into an electrical outlet, the file contents can be stored even if the main unit power switch is turned OFF, but, if the power cord is disconnected the file contents will be erased after approximately 30 minutes.*
- *If the file number is written on the disc jacket it is convenient for verifying or performing the file contents.*
- *The file input and contents can only be displayed when the unit is stopped.*
- *The maximum number of files is 60.*
- *If the number of files exceeds 60, first erase any unnecessary files before making new files. (See page 50.)*

INPUT CHARACTER CORRECTION

- After a character input operation is finished the character can be corrected.
- If no correction is necessary, press the FILE key.

1. Use the PGM CORRECT key to move the cursor (flashing point) to the correction location.

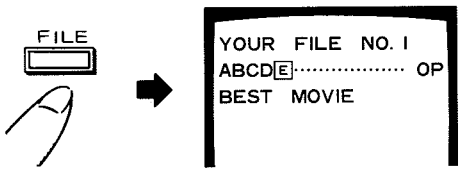
2. Operate the JOG dial or SHUTTLE ring to select the correct character.

3. Press the SEARCH/MEMORY key.

- Repeat steps 1 and 3 and make any necessary corrections.

4. When the input is finished, press the FILE key. This completes the character data input.

- When storing the program in a file, perform the next step.
- When filing a play section, go to the PLAY SECTION DATA INPUT.

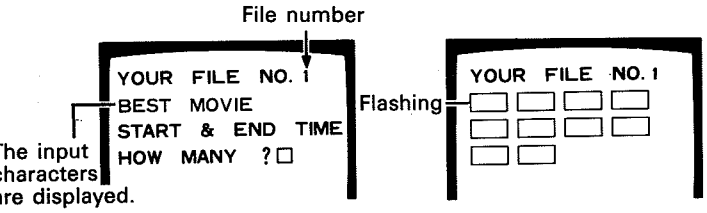


NOTE:

- *Even if side B on a program file is played according to the file on a CD or CDV, it is regarded as the same side.*
- *After the file number and input characters are displayed for a few seconds, the input program is displayed for a few seconds and then disappears. This step completes the input operation.*

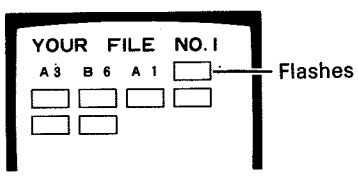
PROGRAM DATA INPUT

1. Press the SEARCH/MEMORY key.



2. Input the program.

- See page 44 "Program Playback".
- A maximum of 10 steps can be programmed.
- Use the PGM CORRECT key (|◄◄,►►|) to correct a program.
- In the figure below, the selections side A 3, side B 6 and side A 1 are programmed.
  (Side B selections cannot be programmed in the first program step).



3. Press the FILE key.

- After the file number and input characters are displayed for a few seconds, the input program is displayed for a few seconds and then disappears. This step completes the input operation.

PLAY SECTION DATA INPUT

- This function is limited to LaserVision Discs.
- The desired play section can be set.
- LaserVision CLV discs: Set by the time number
- LaserVision CAV discs: Set by the frame number

1. Use the DIGIT button to select the play section number (1 or 2).

- Up to two play selections can be set.

2. Use the SIDE button and DIGIT button to select the play section position.

- CLV disc: Input minutes and seconds for the position.
- CAV disc: Input the frame number for the position.

NOTE:

- *When a CLV disc does not have recorded seconds input "00" in the second position.*
- *When the play section is input, TIME, MINUTE, SECONDS is always displayed. Even when the CAV frame number is input, input the number by the DIGIT button directly.*

3. Press the SEARCH/MEMORY key.

4. Select the play end location.

5. Press the SEARCH/MEMORY key.

- If the input is incorrect, use the PGM CORRECT key (|◄◄ , ►►|) to move the cursor (flashing point) to the position to be corrected. Input the correct number and then press the SEARCH/MEMORY key.

This step has set 1 play section.

- If the number 2 is set in step 1, repeat the operations in steps 2-5.

6. Press the FILE key.

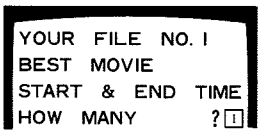
- After the file number and input characters are displayed for a few seconds, the input PLAY section is displayed for a few seconds and then disappears. This step completes the input operation.

NOTE:

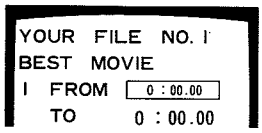
- *Even if a file which specifies the play section is played according to the file on a CD or CDV, the message display is performed but the specified section is not played.*

[Example]
After the character data is input, the play section data can be input.
Setting the play section from 4 minutes 26 seconds to 18 minutes 54 seconds on side A 1 (1 time).

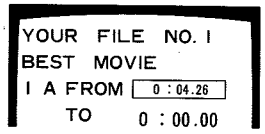
1. Press 1.



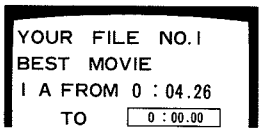
2. Press the SEARCH/MEMORY key.



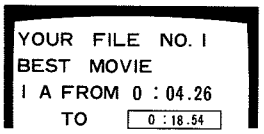
3. Press SIDE A, 4, 2, 6.
● This inputs the play start time.



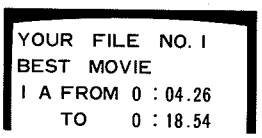
4. Press the SEARCH/MEMORY key.



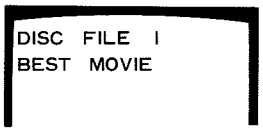
5. Press 1, 8, 5, 4.
● This inputs the play end time.

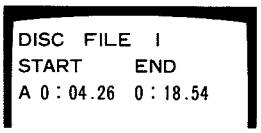


6. Press the SEARCH/MEMORY key.



7. Press the FILE key.





PLAY ACCORDING TO THE FILE CONTENTS

1. Set the disc and press the FILE key.

2. Press the DIGIT key to input the file number.
● Select the file to be played.

3. Press the PLAY key.
● The messages in the files are displayed for a certain amount of time and then play starts according to the program or play section contents.

VERIFYING THE FILE CONTENTS

File contents which have already been input are displayed and can be verified.

1. Press the FILE key.

2. Press the DIGIT key to input the file number. Select the file to be verified.

3. Press the SEARCH/MEMORY key.
● After the message is displayed for a certain amount of time, the program or the play section contents are displayed and then go off.

ERASING A FILE

1. Press the FILE key.

2. Press the DIGIT key of the file number to be erased.

3. Press the CLEAR key.
● Only files whose numbers are selected are erased.

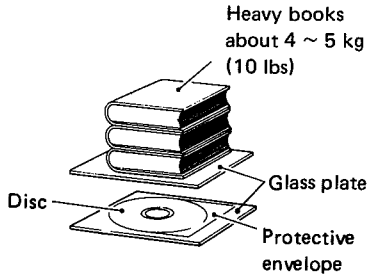
NOTE:
- *It is convenient to write the file number on the disc jacket for future reference.*
- *If file numbers, which apply to a particular disc, are used on a separate disc, the player may malfunction.*
- *When the play section is input, the time, minutes and seconds are always displayed. However, use the number buttons to input CAV frame numbers.*
- *The write to file operation and the file contents display are only possible when the player is stopped.*
- *When a playback is being performed according to the file contents, press the CLEAR button if you wish to return to normal play.*

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after execising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

SYMPTOM	CAUSE	REMEDY
1 **Disc table is not ejected When STOP/OPEN button is pressed.**	• Power cord is not properly plugged into AC wall socket. • Power switch is not turned on.	• Plug in power cord. • Turn on power switch.
2 **Disc table comes out.**	• Disc is dirty. • The disc is not properly set on the disc table. • Moisture has condensed on parts in the player. • Disc is warped.	• Refer to instructions under "Remedy", item 9, and clean disc. • Set the disc properly. • Remove disc and let player stand for 1 to 2 hours until it is dry. • Correct the disc. (Refer to Symptom 9, remedy column.)
3 **TV no longer receives other channels after it has been connected to the player.**	• Antenna cable has not been connected. • TV indicator does not light.	• Connect VHF antenna cable to antenna terminal on the player. • Press the TV/LDP button on the front of player to turn the indicator on, or turn off the player's power switch.
4 **Slanting stripes appear on the TV screen when TV/LDP button is pressed to receive TV broadcasts.**	• Electric field for TV broadcasting is weak. (This does not indicate any trouble.)	• Turn off the power switch of the player. We recommend that you turn off the power switch of the player, whenever you intend to watch TV for a long time.
5 **Remote control does not work.**	• The CONTROL IN terminal on the rear panel is used. • Remote control unit batteries are weak. • There is an obstacle between the player and the remote control unit. • Remote control unit is not in a good location for transmission.	• Remove the connector plug. • Replace batteries. • Remove the obstacle or shift the remote control position. • Operate the remote control unit in front of the player.
6 **Operation of the remote control unit causes the TV to operate improperly.**	• Some TV sets have remote control functions that operate improperly in response to the remote control unit of the player.	• Move the TV and the player further apart, or cover the remote sensor of the TV during disc playback.

WHEN A LASERVISION DISC IS BEING PLAYED

SYMPTOM	CAUSE	REMEDY
7 Disc rotates but there is no picture.	• The TV set is not turned on. • Wrong connections from player to TV. • TV set is not turned to channel 3 or 4. • Player CHANNEL SELECTOR is at the wrong setting. • The television is not properly tuned. • TV indicator is lit.	• Turn on TV. • Make correct connections. • Set TV to the channel (3 or 4) that is not used for TV broadcasting in your area. • Set selector to same channel as the TV's empty channel. • Tune the television properly. (Refer to the User's Manual for the television.) • Press the TV/LDP button on the front of player so that the TV indicator turns off.
8 Picture continuously moves vertically.	• The TV vertical hold control is not adjusted properly.	• Adjust vertical-hold control on TV.
9 Particular disc does not play back properly. The playback stops in the middle of the disc program.	• The playing surface of the disc is dirty. • The disc is warped.	• Use a soft cloth and lightly wipe off the dirt from the surface of the disc. If necessary, moisten a cloth with diluted neutral detergent to remove heavy dirt or fingerprints. • Put the disc into the protective envelope, then place it on a flat desk top. Subsequently, place a flat board on the disc, and load it with weights of about 4 ~ 5 kgs (about 10 lbs). If it is left in this state for one day, sometimes the warp will be alleviated. 
10 Sound is unnatural or distorted.	• CX system is turned ON for disc which has no "CX" mark.	• Press CX button to turn CX system OFF.
11 No sound output during playback.	• MULTI-SPEED playback is being performed. • Sound is output only during the normal play mode. The audio channels are not put out during other playback modes.	• Press PLAY/STILL button or the PLAY key of the remote control unit.

SYMPTOM	CAUSE	REMEDY
12 During STILL playback, a part of the screen shakes.	———	• Even if the disc is a standard play disc, there may be some cases in which a fully still image cannot be obtained, but this does not mean that the player or the disc is defective.
13 CHAPTER SKIP, CHAPTER PROGRAM PLAY and CHAPTER NUMBER SEARCH cannot be performed.	• Disc in which no chapter numbers are recorded is loaded.	• Press DISPLAY key to check if chapter number is displayed.
14 A considerable length of time is required for searching before playback begins.	• It takes time to read the recorded code, depending on the disc.	• Press CLEAR key and picture will appear. (At this point, a scene slightly different from that which has been searched for may appear.)
15 Certain discs take too long to start or do not start.	• There are errors when the disc code is read (there is no damage to the unit).	• Press the STOP/OPEN button and stop the playback. Press the PLAY/STILL button and start the playback again. (Repeat this operation a few times.)
16 The player takes too long to find point A during A - B (INTERVAL) REPEAT operation.	• Same as item 14 above.	• Same as item 14 above. (The repeat mode is cancelled).
17 Picture other than that instructed is searched in TIME NUMBER SEARCH mode.	• Method of inputting numerals in the TIME NUMBER SEARCH mode differs, depending on whether time number is recorded on disc in minutes or seconds, as shown below: [e.g.] 12-minute search • Disc in which time number is recorded in minutes CHAPTER/FRAME·TIME [1] [2] SEARCH/MEMORY "minutes" • Disc in which time number is recorded in seconds CHAPTER/FRAME·TIME [1] [2] [0] [0] SEARCH/MEMORY "minutes" "seconds"	

WHEN PLAYING BACK A COMPACT DISC

SYMPTOM	CAUSE	REMEDY
18 Player stops immediately after starting playback.	• Disc is loaded upside down. • The playing surface of the disc is dirty. • Disc is not properly loaded on the disc table.	• Load the disc correctly with the label side upward. • Use a soft cloth and lightly wipe off the dirt from the surface of the disc. If necessary, moisten a cloth with diluted neutral detergent to remove heavy dirt or fingerprints. • Reload the disc.
19 No sound output	• The stereo amplifier is not correctly connected. • You are not operating the stereo amplifier correctly. • The connection terminals and/or the plugs of the connection cords are dirty. • The plugs of the connection cords are disconnected, or are not fully pushed in. • The player is in PAUSE mode.	• Connect the amplifier correctly. • Refer to the operating instructions for the amplifier, and operate the amplifier correctly. • Clean the plugs and terminals and connect again. • Make sure that connections are correct. • Press the PLAY key and restore the player to PLAY mode.
20 Sound is distorted	• The connection terminals and/or the plugs of the connection cords are dirty. • The plugs of the connection cords are not fully pushed in. • The playing surface of the disc is dirty.	• Clean the plugs and terminals and connect again. • Push the plug in firmly. • Use a soft cloth and lightly wipe off the dirt from the surface of the disc. If necessary, moisten a cloth with diluted neutral detergent to remove heavy dirt or fingerprints.

SPECIFICATIONS

1. General

System .....LaserVision Disc system and Compact Disc digital audio system
Laser .....Semiconductor laser wavelength 780 nm
Power requirements
U.S. and Canadian models .....AC 120V, 50/60 Hz
U.S. Military model ...AC 110V/120-127V/220V/240V or AC 110V/120V/220V/240V (Switchable), 50/60 Hz
Power consumption
U.S. and Canadian models .....50 W
U.S. Military model .....50 W
Weight ..... 11.1 kg (24 lb 8 oz)
Dimensions .....420(W) x 482(D) x 130(H) mm 16-9/16(W) x 19(D) x 5-1/8(H) in
Operating temperature .....+5°C — +35°C (41°F — 95°F)
Operating humidity .....5% — 90%
(There should be no condensation of moisture.)

2. Disc

LaserVision Discs

*Maximum playing times
12-inch standard play disc .....1 hour/both sides
12-inch extended play disc .....2 hours/both sides
8-inch standard play disc .....28 min/both sides 14 min/one side
8-inch extended play disc .....40 min/both sides 20 min/one side
Spindle motor speed
Standard play disc .....1,800 rpm
Extended play disc
.....1,800 rpm (inner circumference) to 600 rpm (outer circumference) (For a 12-inch disc)

Compact Discs

Disc .....Diameter: 5-inch, 3-inch, Thickness: 1.2 mm
Rotation direction (pickup side): Counterclockwise
Linear speed: 1.2 — 1.4 m/sec
*Maximum playing time
60 min. or more: 5-inch discs
20 min. or more: 3-inch discs
(For stereo playback)

Compact Discs with Video

Disc .....Diameter: 5-inch, Thickness: 1.2mm
Rotation direction (pickup side) .....Counterclockwise
Linear speed .....Audio portion : 1.2 — 1.4m/sec
Video portion: 11 — 12 m/sec
Maximum playing time ....Video portion: 5 min. (CLV)
Audio portion: 20 min.(Digital)

**Actual playback time differs for each disc.*

3. Video characteristics

Format .....NTSC specifications
Video output
Level ...1 Vp-p nominal, sync. negative, terminated
Impedance .....75 Ω unbalanced
Terminal .....RCA jack
VHF output
Channel .....Channel 3 or 4 (switchable)
Impedance .....75 Ω unbalanced
Terminal .....F-type jack
S Video Output
Y-output level .....1 Vp-p (75 Ω)
C-output level .....286 mVp-p (75 Ω)
Output terminal .....S-video terminal

4. Audio characteristics

Output level
During analog audio output .....200 mVrms (1kHz, 40%)
During digital audio output .....200 mVrms (1kHz, –20dB)
ANALOG OUT terminals .....200 mVrms
Terminal .....Both RCA jacks
Number of channels 2

Digital Audio Characteristics

Frequency response	4 Hz - 20 kHz (+0.5 dB, –1.0 dB)(EIAJ)
SN ratio	100 dB (EIAJ)
Dynamic range	95 dB (EIAJ)
Channel separation	92 (EIAJ)
Total harmonic distortion	0.04% (EIAJ)
Wow and flutter	Limit of measurement (±0.001% W.PEAK) or less (EIAJ)

● LD is based on EIAJ.

5. Other Terminals

Control input/output .....Both miniature jacks
Optical digital output .....Optical connector

6. Accessories

Remote control unit (CU-CLD015) 1
Size "AA" (IEC R6P) dry cell batteries 2
RF antenna cable 1
Video connecting cord 1
Audio connecting cord 1
Antenna adaptor
(75 Ω/300 Ω → 75 Ω F-type plug) 1
F-type jack — IEC plug adaptor
(U.S. Military model only) 1
Operating instructions 1
Warranty card 1

7. Functions

Remote control unit operations (CU-CLD015).

	Function	Standard Disc (CAV)	Longplay Disc (CLV)	Compact Disc with Video	Compact Disc
Basic Functions	Single-side play	YES	YES	YES	YES
	Dual-side play	YES	YES	NO	NO
	Pause	YES	YES	YES	YES
	Stop	YES	YES	YES	YES
Search	Fast forward (forward and reverse)	YES	YES	YES	YES
	Chapter/Track skip	YES	YES	YES	YES
	Direct chapter/Track number search	YES	YES	YES	YES
	Frame number search	YES	NO	NO	NO
	Time number search	NO	YES	YES	YES
Program	Chapter/Track program play	YES	YES	YES	YES
	Program correction	YES	YES	YES	YES
Repeat	Repeat between 2 points	YES	YES	YES	YES
	Memory repeat	YES	YES	YES	YES
	Chapter/Track repeat	YES	YES	YES	YES
	One-side repeat	YES	YES	YES	YES
	All side repeat	YES	YES	NO	NO
	Program repeat	YES	YES	YES	YES
Trick play	Digital memory	YES	YES	YES	NO
	JOG/SHUTTLE	YES	YES	YES	YES
	Still/Fine slow	YES	YES	YES	NO
	Multi-speed (Forward/reverse 9-level variable)	YES	YES	YES	NO
	Still and sound	YES	YES	YES	NO
	Stobe motion	YES	YES	YES	NO
	One-shot memory	YES	YES	YES	NO
CD/CDV	Random play	NO	NO	YES	YES
	Auto-program edit	NO	NO	YES	YES
	Elapsed time display	NO	YES	YES	YES
	Remaining time display	NO	NO	YES	YES
	Total number of selections, total time display	YES (Only discs with TOC)	YES (Only discs with TOC)	YES	YES

PLAYER FUNCTIONS

- Display, visual calendar display
- Intro Scan, File and Power ON/OFF by remote control
- Last memory and digital sound for LaserVision Discs

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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS [USA] INC. 2265 East 220th Street, Long Beach, California 90810, U.S.A.
P.O. BOX 1720, Long Beach, California 90801, U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3, Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium, TEL: 03/750.05.11
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: [03] 580-9911

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